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ABSTRACT

This book is designed for use as a theoretical and practical tool for planning and implementing secondary school change. Chapter 1 presents the history of the development of the CaMaPe models and a perspective on the universality of educational and organizational structures and describes the kinds of schools appropriate to the models. The basic elements of the CaMaPe system are illustrated through a kite configuration. Chapter 2 provides the background and theory for the models and school-development process, viewing the school as both an educational and organizational system. The third chapter describes in detail five educational models and their components and presents examples of schools that fit each model. Five organizational models and their components are described in chapter 4, which stresses the relationship between a school's organizational and educational structures. Chapter 5 integrates the five educational and five organizational models to form five congruent prototypical school models. The sixth chapter shows how to use the CaMaPe models to enhance school change, offering an example of how the staff of one school implemented a feasible school-development plan. A detailed step-by-step guideline with suggested time parameters is presented. Twenty-three figures are included. Appendices contain charts of and worksheets for the five educational and organizational models. (Contains 36 references.) (LMI)

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CaMaPe

An Organizational and Educational Systems Approach to Secondary School Development

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CaMaPe

AN ORGANIZATIONAL AND EDUCATIONAL SYSTEMS APPROACH TO SECONDARY SCHOOL DEVELOPMENT

Mart Petri and Gina Burkhardt

The Regional Laboratory for Educational Improvement
of the Northeast and Islands
in association with
Algemeen Pedagogisch Studiecentrum (APS)

CaMaPe: An Organizational and Educational Systems Approach to Secondary School Development is based on **School Development: Models and Change (1988)**. This book is a result of a special alliance between The Regional Laboratory for Educational Improvement of the Northeast and Islands and The NETWORK, Inc. in Andover, Massachusetts, and Algemeen Pedagogisch Studiecentrum (APS) in the Netherlands. The APS is one of three national school improvement institutes in the Netherlands. It provides information, trains and instructs educators, and assists in implementing tailor-made changes in education. In adapting this book for use in the United States, the authors have made changes in text and format to account for the differences in school structures between Europe and the United States. However, the challenges that face secondary schools are similar, and the issues raised are universal.

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FOREWORD

Any school facing the challenge of restructuring struggles to define the kind of organization it is now. It begins asking and answering questions about the kind of organization it wants to become, hoping that the new organizational structure can better prepare students for the next century.

But most of us do not think in organizational terms, nor do we have time to. And when we do, we have few organizational experiences from which to draw comparisons. Although we might have taught or been an administrator in several schools, we often lack the perspective that can help us analyze where we are and, thus, plot a school development course.

Fortunately, a group of Dutch researchers who directly assist schools undergoing change spent several years studying different types of school organizations. As they examined schools along two primary dimensions – their educational structure and their organizational structure – they detected five distinct models. They suspected the models might be useful to schools involved in reform.

When their work was published in 1988 by the Academic Publishing Company (Acco) as *School Development: Models and Change*, it attracted the attention of many of us involved in the International School Improvement Project (ISIP), and we began to ask ourselves – and them – if their models, that were being used in Europe, might apply to U.S. schools. Thus began a productive collaboration between staff of The Regional Laboratory and APS, first so that we could better understand their models and how schools could use them to examine their practices, structures, and beliefs about children, then to test the models in American schools to see if we should attempt a U.S. edition of the original book.

Educators here have reacted enthusiastically to the models as a vehicle to think about their schools' purpose and goals and then align their organizational structures to meet their goals. The CaMaPe models also help us understand the path or paths a restructuring journey is likely to take and to be patient as we work our way through various phases to new plateaus. Trains don't climb straight up mountainsides but zigzag their ways on navigable slopes, sometimes going through mountains, sometimes over treacherous bridges but always moving forward. So, too, must those of us committed to transforming our education system to prepare today's young people to productively take their places in the twenty first century select and maneuver a navigable path.

Sometimes the obstacles seem like mountains, sometimes the risks are treacherous. But with patience, persistence, and understanding, we can forge ahead.

We hope that the CaMaPe models presented here can help you plan, understand, and undertake your journey. Our children are counting on it.

David P. Crandall, Ed.D.
Executive Director
The Regional Laboratory

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PREFACE

Secondary education in Western societies faces new challenges. The clamor for schools to respond to the urgent priorities of a changing world raises fundamental questions about the way schools are organized, as well as about educational purposes and processes within these organizational structures. National- and state-level deregulations reflect a growing tendency toward increased flexibility for policy making at the school-building level. This flexibility is regarded as critical for creating an atmosphere in which schools can develop and improve.

To face the challenges of school development in this age of restructuring and redesign, schools must be able to assess and develop their skills and capacities for autonomy. It is clear that schools need better tools or instruments to help them diagnose their level of functioning, in the domains of both education and organization, while establishing developmental paths for improvement. In this book, we attempt to help schools with this process by mapping out a developmental continuum for school change and improvement.

The process begins with an understanding of the distinctions between educational and organizational structures in a school. We make these distinctions clear through the description of five educational and five organizational models. The process continues with the combination of these five models and the presentation of the five combined models into one model-configuration that pinpoints specific areas for school development. The CaMaPe process serves both as an instrument for the analysis of situations and constraints in schools and as a tool for defining and designing future school development efforts and the routes leading there.

We wrote this book for policymakers, school administrators, internal and external change agents, trainers, and researchers who want to have a more comprehensive understanding about the nature, purpose, and structure of secondary schools and who want to be more successful in planning processes and structures that work for schools in the future.

ACKNOWLEDGEMENTS

This publication is an adaptation and translation of *School Development: Models and Change*, Leon de Caluwé, Ernst C.H. Marx, and Mart W. Petri (1988). Through ongoing discussions and collaborative work, both Leon and Ernst have provided invaluable encouragement and support for us in preparing this publication.

This book grew out of an alliance between The NETWORK, Inc. (Andover, Massachusetts) and Het Algemeen Pedagogisch Studiecentrum (The Netherlands). In the late 1980s, Deborah Roody of The NETWORK, Inc. and Boudewijn Van Velzen of APS made initial contacts that led to this project and coordinated several exchanges and cooperative efforts between the two organizations. In August of 1989, Mart and Boudewijn introduced the CaMaPe models to the staff of The NETWORK and The Regional Laboratory for Educational Improvement of the Northeast and Islands, a close affiliate of The NETWORK. The Regional Laboratory eventually incorporated work on CaMaPe into its program of work. The Laboratory and APS provided financial and production support for this book, for which we are grateful.

Part of the work undertaken by the Laboratory staff was to modify the CaMaPe models to make them more relevant for American schools. The working group included Pat Cox, Deborah Roody, C.G. Shaffer, Wyllys Terry, Kammille Terstegge, and John Watkins. We have incorporated many of their suggestions and revisions in this book.

We thank Deborah Roody for her valuable suggestions and edits and also for her friendship and words of encouragement, Susan Loucks-Horsley for coordinating the effort, and Bert Ottens for his technical assistance.

Our special thanks to Leslie Hergert of The Regional Laboratory for her painstaking and thorough editing of the manuscript and to Susan

Smith of Central Word Processing for her fine skills in both processing and formatting the text and drawing the figures.

We dedicate this book to our daughter, Merel Elizabeth Burkhardt Petri, the quintessential collaborative effort.

Mart Petri, Gina Burkhardt
June 1992

A GUIDE FOR USING THIS BOOK

CaMaPe: An Organizational and Educational Systems Approach to Secondary School Development is designed for use as a theoretical and practical **tool** for planning and implementing secondary school change. We recommend that you read the whole book before using the models. If you are using *CaMaPe* to help your school and/or community develop a plan for restructuring or for a workshop or course, you may want to select individual chapters to study over a period of time. The guide is also helpful in understanding the CaMaPe models if you are reading the book for information, background, or as a resource for school development.

Once you've analyzed and reflected on the current educational and organizational systems in your school, you can use the book to study the type of systems you would like to have and plan activities and strategies to help your school move from where it is to where you want it to be.

The figures and appendices contribute to a better understanding of the models and their uses. We urge you to use them to help clarify the different characteristics of the educational and organizational systems that are integrated into the CaMaPe models.

Following is a brief description of each chapter, the figures, the appendices, and suggested ways of using the book for a workshop, course, and/or as planning tool for school development and change.

CHAPTER 1. INTRODUCTION

The introduction presents the history of the development of the CaMaPe models and an interesting perspective on the universality of educational and organizational structures. By describing what kind of schools these models are appropriate for, it allows you to decide if *CaMaPe* will be useful to your school or group. If it is not appropriate for use in your school setting, you still may want to use it as a reference. This chapter provides both text and figures that describe the basic elements of the CaMaPe system, the use of a kite configuration as a basis for visually understanding them, and introduces the educational and organizational models that are discussed in depth in subsequent chapters.

CHAPTER 2. BACKGROUND AND THEORY

Chapter 2 provides background and theory for not only the models but for school development itself. It discusses the school as both an educational and an organizational system. Each of the educational and organizational models are introduced in preparation for the fuller descriptions that follow in Chapters 3 and 4.

Groups studying this book may want to spend a good deal of time discussing the theories put forth in this chapter. The figures give a graphic presentation of the text and may help people to better understand the theory.

CHAPTER 3. FIVE EDUCATIONAL MODELS

Chapter 3 describes in detail the five educational models and their components. After a discussion of the seven components that make up the educational models, each model is presented and illustrated by a concrete example of a school that fits the model.

Referring to Appendix A will greatly enrich Chapter 3. It is a chart that graphically presents the five educational models, their components and the specific definitions of each. And it arrays the information in such a way that you can compare the similarities and differences of the models and components.

Taking the time to study and discuss each model separately before comparing the models will lead to a better understanding of each. We suggest that you use the Figures 1.4 through 1.7 (Chapter 1), and Appendix A as you discuss each model.

CHAPTER 4. FIVE ORGANIZATIONAL MODELS

This chapter presents the organizational models and their components. A school's organizational structure either supports or impedes its educational structure. Appendix B (**Chart of the Five Organizational Models, Their Components and the Specific Definitions**) presents the models and their components graphically so you can study and make comparisons from model to model.

Appendix B and Figures 1.4 through 1.7 should be used in the same way that they were used for Chapter 3.

CHAPTER 5. FIVE ORGANIZATIONAL/ EDUCATIONAL MODELS OF SCHOOLS

The integration of the five educational models discussed in Chapter 3 with the five organizational models discussed in Chapter 4 to form five congruent prototypical school models is the subject of Chapter 5. These models then serve as the basis for a discussion of school development. Each integrated model is discussed in detail and presented graphically. Figures 5.0 to 5.5 are woven into the text to help the reader better understand each model as it is presented.

Referring to Appendices A and B will enable you to review each model as you discuss the integration. Once you have studied this chapter, you will be prepared to use the book for your own planning purposes.

CHAPTER 6. APPLICATION AND USE OF THE MODELS

The final chapter shows how you can use the CaMaPe models to bring about school change. It offers an example of how the staff of one school used the models to analyze and reflect on what type of school they had, discuss what they wanted to be, and decide if it was feasible for them to begin a school development plan. Included in their deliberations were discussions about how the school staff might receive the report on what type of school they were and their suggested plans for school improvement.

This chapter also gives a step-by-step guide to using the CaMaPe models with time expectations and guidance for group leaders. Appendix C provides worksheets for participants to use in analyzing the structures currently in place in their schools. Your group will want to refer to the previous 3 chapters, figures, and appendices and also study Figures 6.0 to 6.4.

FIGURES

CaMaPe's 23 figures illustrate the concepts presented in the text. They are listed by number, title, and page number in the Table of Figures and Appendices. These figures have been provided to aid in understanding all the models and how they can be used in diagnosing, planning, and implementing a school improvement program.

SUGGESTIONS FOR USE IN A WORKSHOP, COURSE, OR STUDY GROUP

If you are using *CaMaPe* as part of a course or workshop, you may want to have participants read Chapter 1 before your first meeting. Its background will provide a basis for discussion and a good way to introduce the **kite configuration** as you begin your study.

Chapter 2 will raise discussion on school development, professional and organizational theory, and how these work together. Your school or group may have already spent time on understanding the concepts of school development and restructuring. If time is limited this chapter can be skipped in the discussion process, since Chapter 1 introduces the models.

Chapters 3, 4, and 5 can best be approached in one of three ways: each chapter can be studied and worked on alone; or the corresponding educational and organizational models can be studied together; or the educational, organizational, and integrated models can be studied together.

Chapter 6 has a variety of uses. You many want people to read it with Chapter 1 so they see the strong connection between the theoretical and the practical application as they begin the book. You may want them to read it in the order that it appears, or you may not want to use it at all but begin to use the models after completing Chapter 5.

For whatever purpose you read this book, it will provoke discussion and reflection on how and why schools are organized.

APPROACH 1	APPROACH 2	APPROACH 3
Read and study each Chapter in sequence	1. Read Chapters 1 and 2 2. Read Chapters 3 and 4 introductions 3. Read Chapter 3 (Educ. Models) and Chapter 4 (Org. Models) Model 1, use Appendix A and B that relate to Model 1 4. Read Chapters 3 and 4 for Model 2 and proceed in same way until all 5 models are read and discussed 5. Read Chapter 5 (Integrated Models) 6. Read Chapter 6	1. Read Chapters 1 and 2 2. Read Chapters 3, 4 and 5 introductions 3. Read Chapter 3 (Educ. Models), Chapter 4 (Org. Models), and Chapter 5 (Integrated Models) Model 1, use Appendix A and B that relate to Model 1 4. Read Chapters 3, 4, and 5 for Model 2 and proceed in same way until all 5 models are read and discussed 5. Read Chapter 6
Use Appendix A, B, and C as appropriate	Use Appendix A, B, and C as appropriate	Use Appendix A, B, and C as appropriate
Figures 1.0 - 6.4	Figures 1.0 - 6.4	Figures 1.0 - 6.4

1. INTRODUCTION

HISTORY OF THE CaMaPe MODEL

In the early 1980s, Leon de Caluwé, Ernst Marx, and Mart Petri wanted to contribute to the growing body of international knowledge and understanding about school organization and change theories. At a seminar held in the Netherlands in October 1983 by the International School Improvement Project (ISIP), de Caluwé and Petri presented their educational and organizational models for describing comprehensive secondary schools. Participants from seven countries reacted favorably to this introduction to CaMaPe — named from the first two letters of the three developers' surnames and pronounced "Kah-Mah-Pay." Considering the theory relevant and refreshing, the participants received it well and requests were made for translation and adaptation to make the models accessible to other countries. Since that time, the models of CaMaPe have been updated and used in several European countries (Belgium, United Kingdom, West Germany, Sweden, and others) and in the United States. In fact, these models serve as a frame of reference for a Dutch school development program (SiO) in which 350 secondary schools participate.

The de Caluwé/Petri models were partly inspired by the educational and organizational models designed by Ernst Marx in the 1970s. The Marx models gained national attention in the Netherlands, and their use is widespread, for example, in the national course of in-service training for school leaders. Many aspects of the Marx models and the de Caluwé/Petri models are similar, especially the underlying ideas and methodology for the construction of the models. Several research studies support the Marx models. They are empirically tested, confirmed, and validated for the Dutch context (Van de Krogt and Weijzen 1982, Van de Krogt 1983, Van Marwijk Kooy 1984, Weijzen 1985). Case studies of many schools in the Netherlands and Belgium have also been developed (de Caluwé and Petri 1981).

The models are based partly on a comprehensive school development program established in Germany in the 1960s and 1970s, but even more so on experiences with general school consultancy practices, school reform, and theoretical reflection. The models are an expression of the developers' belief that school organization is regarded too narrowly – often based on one specific theory. Even within a single culture, there is much diversity among schools, and when development is the focus of a school, the diversity becomes even greater. Therefore, schools require diverse theoretical approaches to properly describe the school organization.

Because the CaMaPe models were initially developed for the Dutch educational context, they assumed an understanding of the Dutch educational system, its institutions, culture, and tradition. For this reason, efforts were made to modify and elaborate the models to ensure applicability in any country while also leaving room for development under other national, state, and local contexts. These efforts were supported by international contacts and international use of the models (de Caluwé, Marx, and Petri 1988), including use in the United States.

The structures of secondary education are different in different countries. However, this book and the models it presents are appropriate for a wide range of secondary schools that have the following characteristics:

- The schools are medium to large in size.
- The schools serve students of all abilities from early to late adolescence.
- The schools have a mixed-ability pattern of intake: All students are educated under one roof, and decisions are made about the organization of ability groups (designated by the term *integrated school*).

Today, CaMaPe models are used under many different circumstances and in a variety of ways. For example:

- Technical assistors use the models to help their clients understand the general nature of school developmental processes in order to gain better insight into their own school (**awareness, understanding, reflection**).
- External consultants use them to diagnose and analyze conditions and constraints in schools in order to design future developmental processes (**diagnosis and analysis**).
- Internal change agents use them as instruments for diagnosis and as a basis for action (**diagnosis and implementation**).

THE BASICS

CaMaPe contributes to an already substantial field of theory and research on school development. Although the CaMaPe approach is relatively new, it has links to other theories (organizational development theory, professional organizational theory, contingency theory, and sociotechnical systems theory). At the heart of CaMaPe is sociotechnical systems theory, which says that all organizations have two systems: one for their technical work and another for social relations among the people within them. In schools, this translates to an educational system and an organizational system. CaMaPe describes ways of organizing each and theorizes that congruence is needed between a school's educational and organizational systems. CaMaPe goes further to propose processes for development along two continuums.

The Two Continuums

CaMaPe provides a framework for understanding schools and school development that focuses on two continuums: one, from simplicity toward differentiation and integration; and the other, from mechanistic to organic coordination.

1. Simplicity/Differentiation/Integration Continuum

The simplicity/differentiation/integration continuum, as shown in Figure 1.0, represents the division of labor in an organization and, therefore, provides a basic explanation for its development (Lawrence and Lorsch 1969). Development is defined as movement along a continuum from simplicity towards differentiation and integration.

Figure 1.0 Simplicity/Differentiation/Integration Continuum

Simplicity
Differentiation
Integration

In a simple structured school, there is relatively little differentiation of tasks; that is, every teacher performs only one task, that of subject teaching. From this starting point, schools may grow larger, become more specialized, develop more complex structures, and begin to differentiate tasks. For example, in some schools, student guidance becomes an objective separate from subject teaching and exists outside the classroom, which requires these differentiated tasks (teaching and guidance) to be coordinated and better defined. In other schools, differentiation becomes even greater when new educational objectives and activities (themes, outdoor projects, work-study and the like) result in more diverse tasks for the teachers. And in other schools, growth itself can be a reason for enhanced differentiation when departments develop their own specializations. In these more differentiated schools, the need for coordination is great, and a coordination structure must emerge.

Within a school, task differentiation is appropriate up to a certain level or degree. But after some experience with differentiated tasks or when differentiation becomes unmanageable, coordination of tasks becomes a more innate part of the work itself. This is called integration. For example, teachers and guidance counselors cooperate or coordinate their efforts in such a way that teachers include guidance activities in their lessons and counselors refer to or work with specific subject activities (for example, a theme project that involves a team of subject teachers and guidance counselors). The various aspects of their differentiated teaching and guidance tasks come together and are integrated.

Successful integration endeavors may lead to a largely integrated organization in which each teacher functions in a variety of roles dictated by the task at hand. In integration, teachers have acquired, by experience and learning, the skills to execute a variety of tasks, which is in striking contrast to the one-task/one-subject teacher at the simplicity end of the continuum.

2. Mechanistic/Organic Continuum

The mechanistic/organic continuum shown in Figure 1.1 applies specifically to the ways in which work is coordinated. In a simple undifferentiated organization, there is little need for coordination. As tasks become more differentiated, more coordination of tasks is necessary.

At one end of the continuum is a mechanistic organization often identified with a hierarchical bureaucracy. This bureaucracy relies on well-defined tasks, procedures, work, and output standards established by a hierarchical management through vertical lines of direction and authority. Though bureaucracy solves some problems, it also may result in well-known dysfunctions such as miscommunication, irresponsibility, and informal power structures. Efforts to avoid or correct these dysfunctions can lead to a variety of adaptations that better meet organizational and human needs.

Figure 1.1 Mechanistic/Organic Continuum

Mechanistic
Organic

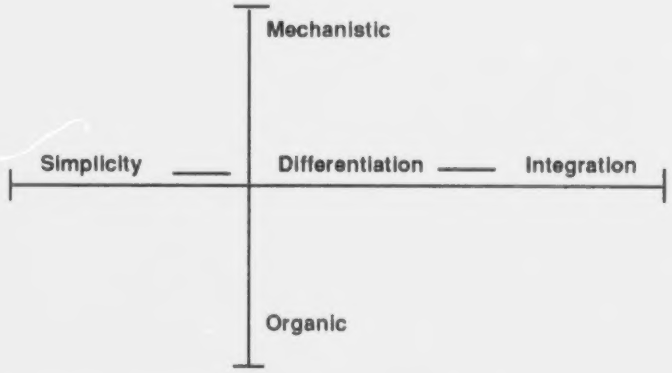
At the other end of the continuum, an organic organization stresses the human factor on several levels and in a more consistent manner. It recognizes the benefit of enhancing personal responsibility, interpersonal communication, and more "natural" methods of control. Professionals in an organic organization inherently tend toward horizontal or peer communication because all skills and knowledge receive equal recognition.

At the extreme positions, the differences between mechanistic and organic organizations are striking. Picture a school with differentiated departments in which a clear hierarchy exists and another school where all teachers and counselors regularly consult with one another. More common are schools that hover between these two extremes.

The Model Configuration: The Kite

The two intersecting continuums form the skeleton of a kite, shown in Figure 1.2, depicting the steep, rapid need for coordination in the differentiation phase and a more gradually decreasing or loosening of the coordination structures in favor of the integration of tasks.

Figure 1.2 Intersecting Continuums

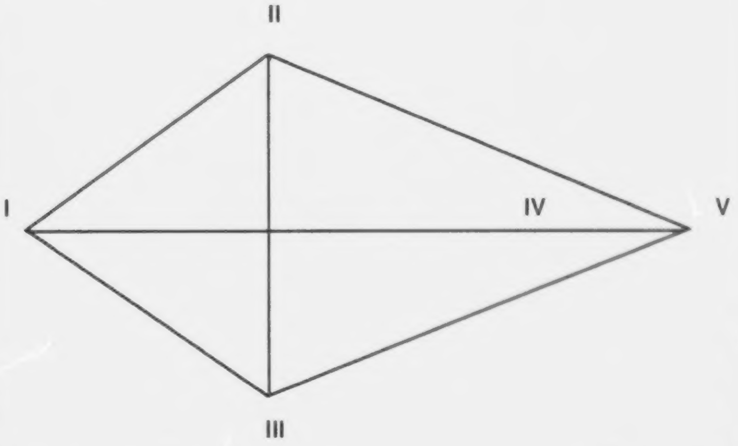


In CaMaPe, a prototypical school model is identified at each end of the axes of the kite. There are five models in all, identified I-V.

Development is defined as a process of movement related to three main characteristics: an increase in individuality and flexibility within a school, a broadening of educational offerings (therefore, a more complex organization), and an enhanced sense of innovation and renewal in the school. The connecting lines of the kite outline the area within which development can occur (Figure 1.3).

The kite shape (shorter to the left of the intersection of the axes and longer to the right) indicates the time needed to develop from one model to another. For example, a Model I school, once it recognizes and accepts the need for development, can move relatively quickly into a Model II or III school. But it takes a school much longer to move into a Model IV or V school because a well-established, differentiated organization is more reluctant to change its structure. This reluctance is reinforced in school organizations with a primarily cognitive focus because development into a more open, individualized school focused on social, personal, and cognitive growth is complicated and affects all aspects of improvement.

Figure 1.3 The Kite

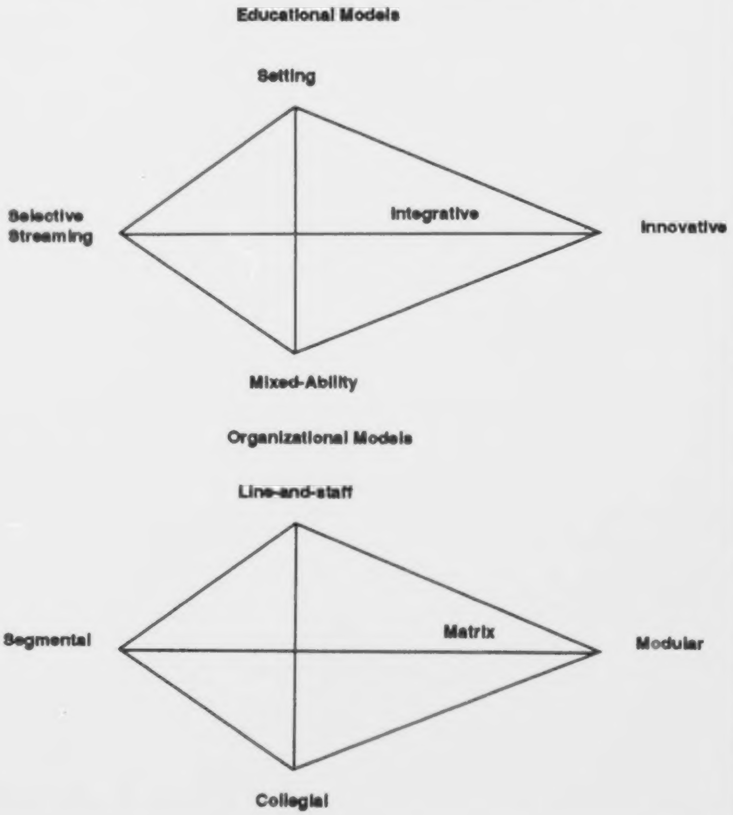


Note that as a school moves along the horizontal continuum to the next developmental stage, it is no longer possible for the school to assume a position at either extreme on the vertical axis. Rather, the closer a school comes to integration, the more balanced the relationship between hierarchical support and clearly defined procedures based on professional consultation.

Educational and Organizational Models

The kite configuration applies to the two subsystems of a school: educational and organizational (Figure 1.4). The educational subsystem includes the primary processes or production line of the school (for example, the classroom). The organizational subsystem is the school's social processes supporting the primary task (for example, the staff meeting). In CaMaPe, there are five models for the educational subsystem and five models for the organizational subsystem of a school. On the horizontal axis, Model I represents a subject-based, selective school with a simple, segmented organizational structure, and Model V represents an open learning environment with a complex, integrated organizational structure. On the vertical axis, Model II represents a well-defined tracking (setting) configuration based on core subjects with a mechanistic organizational structure (bureaucratic), and Model III represents a mixed-ability pattern of education with an organic, highly communicative school organization.

Figure 1.4 Educational and Organizational Models


Educational Models
Setting
Selective Streaming
Integrative
Innovative
Mixed-Ability
Organizational Models
Line-and-staff
Segmental
Matrix
Modular
Collegial

Model IV, an example of another position within the area of development, represents a fairly differentiated and integrated educational structure and a balanced position between the mechanistic and organic coordination structures. Much of the coordination in

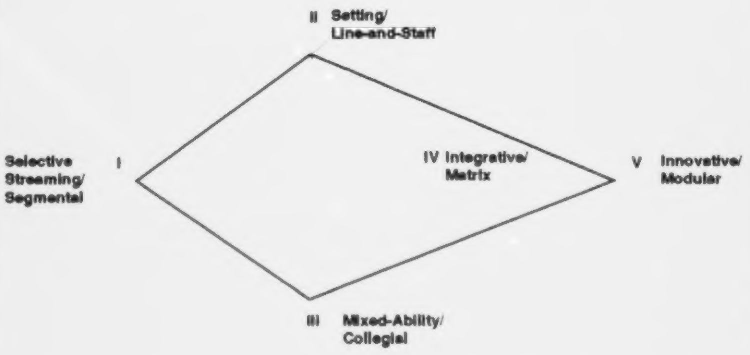
Model IV is done by the task-performers through integrated processes in addition to the coordination done by the school management.

The five school models represent extreme situations. In reality, schools may differ in many respects from their prototypical positions, and many schools' descriptions may be found situated in between two or more models or scattered within the kite.

A strong relationship exists between educational and organizational models, and theoretically, they should be congruent. For example, a simple educational process, like the undifferentiated one found in Model I, needs minimal coordination and cooperation among the staff. However, a complex educational process, like the differentiated and integrated procedures of Model IV, needs a lot of coordination and cooperation among the staff. Without these organizational processes, this educational model could not be executed. And similarly, such an organizational model would be superfluous in the educational process of a Model I school.

The matching educational and organizational models are expressed by the labels shown in Figure 1.5.

Figure 1.5 Educational/Organizational Models


II Setting/
Line-and-Staff
Selective
Streaming/
Segmental
I
IV Integrative/
Matrix
V
Innovative/
Modular
III Mixed-Ability/
Collegial

The Components

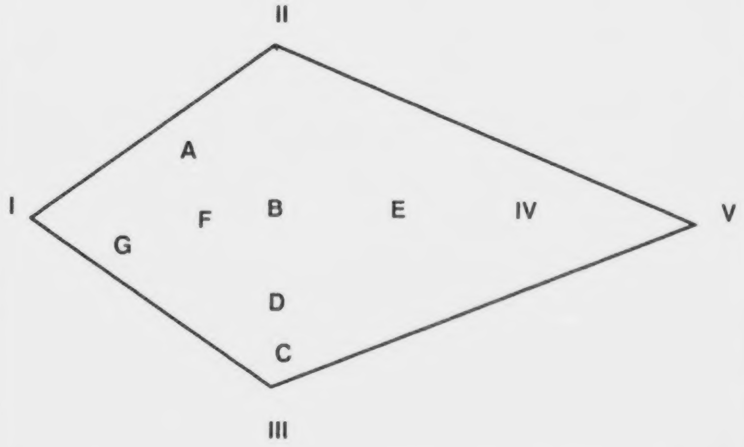
The components are the bricks of the models. Each component and subcomponent has a unique definition derived from the theories that support the conceptual framework; they are the specifications of the theories. There are separate components for the educational and organizational models, and each model differs because the definitions of the components differ. Figure 1.6 is an example of the different definitions for one educational and one organizational component.

Figure 1.6 Examples of Components

MODELS COMPONENTS	I	II	III	IV	V
B.I Focus of the Curriculum	cognitive in all subjects	cognitive in all different ability levels	same as II plus the pace and levels differ	cognitive, affective, normative, expressive, aimed at the student	same as IV plus focus on group process
6.II Amount of Teacher Autonomy	full individual autonomy in the classroom	limited by guidelines and hierarchy	constrained by subject department guidelines	limited by internally developed school policy	limited by modular teacher teams

When we consider the definitions for all the components related to that specific model, we obtain a comprehensive description of any of the five school models. These comprehensive images are the prototypical school models. However, in reality, a school may display components that are related to more than one model, and these variations provide the unique image of that school. Figure 1.7 is an example of a kite with the educational components plotted for a specific school. We discuss this in detail in Chapter 3.

Figure 1.7 **Educational Components for a Specific School Plotted on the Kite**



The Components of the Educational and Organizational Models

The components of the educational models constitute the technical subsystem or the operating core where the basic work is performed. The educational models have seven main components, each with several subcomponents:

A. View of the student
B. General focus and structure of the curriculum
C. Organization of learning
D. Grouping patterns
E. Student guidance
F. Testing and reporting
G. Evaluation of teaching and instructional processes

The components of the organizational models constitute the social subsystem where formal relations, information flow, and decision making are performed. The organizational models are defined by 16 components with multiple subcomponents that fall within four general classes:

1. Organizational structures
2. Coordinating mechanisms
3. Governing body and management
4. Complexity of the organization

These are the basic elements of CaMaPe. In the following chapters, we provide a brief history of its development and some underlying theory.

2. BACKGROUND AND THEORY

INTRODUCTION

In Chapter 1, we described the history and basic conceptual framework of CaMaPe. In this chapter, we provide some background on school development and organization and related theories. In the first section, we describe the four critical factors in school development. In the sections on the school as a professional organization and coordinating mechanisms, we discuss these critical organizational concepts. And in the section on related theories of organization, we consider the roots of CaMaPe.

FOUR CRITICAL FACTORS IN SCHOOL DEVELOPMENT

School development is a complicated and multifaceted process that focuses on examining systems and making them more effective. Four essential factors of school development follow. Of these four, CaMaPe focuses on the second and third factor:

- the people in the school, both staff and students, including their views, capacities, desires, and aspirations;

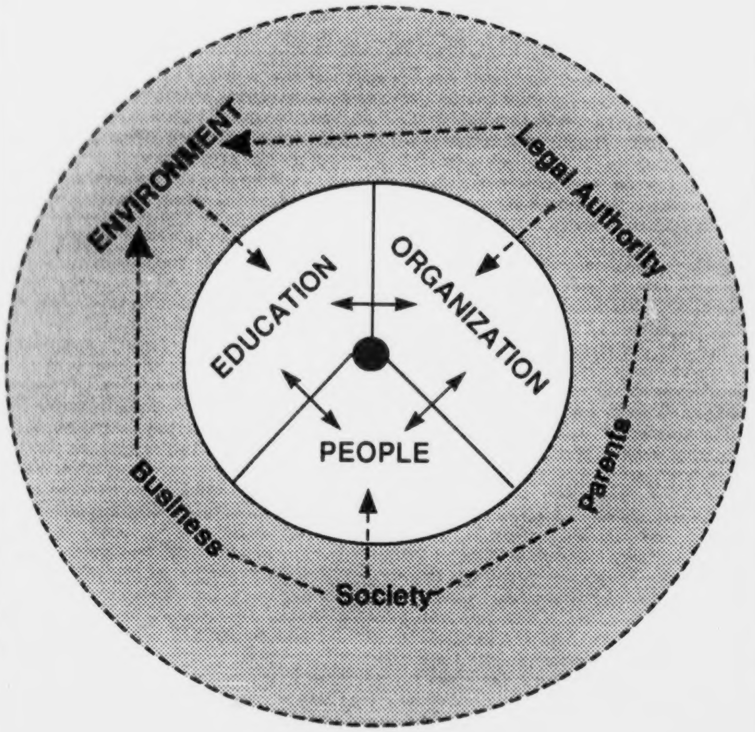
- **the school's educational system or educational program, including the curriculum objectives, curriculum content, instructional methods and approaches, resources, grouping patterns of students, and student counseling services;**

- **the organizational system, including the way teachers are grouped, the existing organizational culture, the relative positions of staff, the management structure, and the distribution of responsibilities**; and

- the environment affecting the school, including the way education is organized at a national level (financing of schools and legal regulations) or the school's social and local environment (the economic situation, political relations, neighboring schools, parents, and community).

Figure 2.0 illustrates these four factors.

Figure 2.0 Four Critical Factors of School Development


ENVIRONMENT
Legal Authority
EDUCATION
ORGANIZATION
PEOPLE
Business
Parents
Society

These factors constitute an interacting whole. Change that occurs in one factor in the school affects other factors. All factors interact with, and therefore affect, each of the other factors. For example, the environment exerts its influence on the other factors by restricting the possibilities of change in the other factors and vice versa. Here is an illustration:

> *A change in the educational system occurs: group work is introduced in a secondary school as a replacement for formal whole class teaching. To successfully make this change, teachers and students will work in new ways* ***(the people factor).*** *Teachers will take on a new role as group facilitators rather than instructors and must relate to students in new ways. They will probably need in-service training* ***(the organizational structure factor).***
>
> *Parents, however, may react to this change with approval or disapproval* ***(the environment factor).*** *Their reaction may relate to the modified educational model (the group work), or the changed organizational structure (the teacher's position is no longer clear), or the teachers' attitudes (they want to give more independence and responsibility to pupils).*
>
> *Some primary schools in the neighborhood may advise parents not to send their children to this secondary school because they believe that group work may lead to low individual achievement* ***(the environment factor).***
>
> *Thus, process developments come about: Disapproval from the environment (complaints and concerns from parents) may result either in another change in the educational system (reduction or abolition of group work) or in the creation of different organizational structures (new methods for informing and involving parents).*
>
> *But this new organizational structure may now limit teachers' opportunities to experience working with groups. This may lead to disappointment among other primary schools that feel a*

strong kinship with such an innovation and consider it a continuation of their own approach to education.

This illustration shows how change in one factor may result in changes in other factors. Clearly, the factors are interrelated to a high degree, but the relationship can be conflicting as well as complementary.

THE SCHOOL AS A PROFESSIONAL ORGANIZATION

Schools are inherently professional organizations, organizations consisting of individuals whose work belongs to the "professions" – a fact that CaMaPe recognizes in *all* models. Professions are frequently defined as having the following characteristics:

- Work is based, at least partly, on a scientific body of knowledge; its practice requires an extended period of training.
- The work has some importance for clients.
- The relationship between the professional and the client strongly influences the effectiveness of the service rendered.
- The professional worker feels a sense of belonging to an institutionalized group of professionals.
- There are continuing professional discussions about the body of knowledge that have practical and ethical implications. These discussions result in more explicit codes for professional behavior.

Regular evaluation of the work of professionals is not standardized, and in many cases, evaluation is not even performed due to the type of service offered and the fact that the primary professional skill is gained through continuous training. Owing to this limited supervision and evaluation, professionals must learn to be self-sufficient and relatively autonomous. Often, this further contributes to individuals' resistance to external supervision and evaluation.

The nature of a professional organization demands that structures and conditions exist both for the division of labor and for the cooperation and coordination among professionals who perform essential services. The school as a professional organization has been called a "loosely coupled system" (Weick 1976) because of the relative independence of the parts and the lack of effective control and coordination by management. In addition, the limited focus on supervision and evaluation leads to a number of inherent weaknesses in these structures and conditions (for division of labor or coordination) in schools. For example:

- Quality control is almost impossible since failure can always be attributed to the client. ("The student hasn't the ability to learn.")
- Every decision is subject to discussion and consultation. This takes time, which may be extensive enough to dampen enthusiasm for innovation. ("We can't do anything until we first discuss all the implications and consequences.")
- The difficulty in establishing controls for work lends itself to the development of an "organizational anarchy." When class duties are over, teachers are free to leave. ("I have to go now.")
- Since everyone's opinion is considered valid, regardless of his or her professional behavior, consensus is not reached. ("We don't want to interfere with her professional autonomy.")
- Convergent thinking lends itself to a hidden agenda to maintain the status quo. If new staff members are recruited, they have to adjust to the existing team. ("This is the way we do things here.")

The nature of the school as a professional organization is the main reason for having two elaborate subsystems: educational and organizational. In a school, the interdependency of the various parts is due to the complexity of the primary operation, that is, teaching students. As the educational processes become more complex, enhanced cooperation and coordination become more necessary. In response, the number and degree of organizational structures for information flow and decisionmaking get more complicated. Even in a relatively simple educational system, the fit with organizational structures must be fairly congruent.

The concepts of the organizational models of CaMaPe are related to, but not identical with, the concepts Mintzberg (1979) used to construct his organizational models. Mintzberg's models are labeled simple structure, machine bureaucracy, professional bureaucracy, divisionalized form, adhocracy, and missionary organization. These organizational models differ in respect to their division of labor and the mechanisms designed to coordinate this division.

The primary links between the CaMaPe models and Mintzberg's models are found in the two typologies of organizations called the professional bureaucracy and the adhocracy. Both types of organizations are based on the importance of professional skills as coordinating mechanisms. Within a professional bureaucracy, professionals work autonomously, and coordination is based primarily on internalized professional skills (common ways of thinking and problem solving). Within an adhocracy, an additional and more significant coordinating mechanism exists called mutual adjustment or consultation.

Three of the CaMaPe models may be considered variations of the professional bureaucracy (with some elements of other organizational models):

- The **segmental organizational model** is a professional bureaucracy with some characteristics of a simple structure, especially in terms of the informality of the relationships. Schools with a segmental organization are not usually large.

- The **line-and-staff organizational model** is a professional bureaucracy larger than a segmental organization with some characteristics of a formal bureaucracy, which means that rules are determined and controlled by management.

- The **collegial organizational model** is a professional bureaucracy with some characteristics of an adhocracy. A recognized need for high levels of coordination is achieved by mutual adjustment.

The remaining two models have the characteristics of an adhocracy (with some elements of other organizational models):

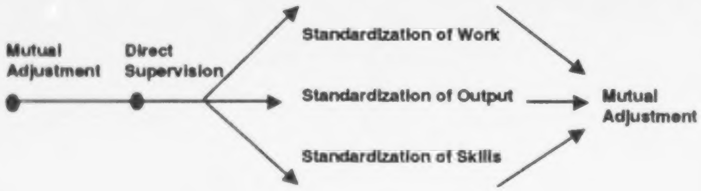
- The **matrix organizational model** of schools is an adhocracy where the most important coordinating mechanism, besides professional skills, is the policy of the school. Policy is the result of consultation (mutual adjustment) and consists of generalized rules or guidelines. The model also has elements of both a machine bureaucracy (where formally standardized working conditions, procedures, and rules are fixed by a hierarchical management) and a missionary organization (where direction comes from a shared ideology).

- The **modular organizational model** most resembles a divisionalized form: Every modular unit (team of teachers) within the school is an autonomous division. Professional skills and a common culture are the dominant coordinating mechanisms within and between the teams. So, the modular organization is also a missionary organization.

COORDINATING MECHANISMS

Different organizational models call for different mechanisms to coordinate their people and work. Coordination of such processes as the division of labor, work outputs, communication, and desired behavior is a critical part of any school's organizational structure. However, coordination may be poorly developed or almost lacking in many schools. Mintzberg (1979) formulates five levels of coordinating mechanisms and sees them developing in complexity along a continuum toward mutual adjustment as shown in Figure 2.1.

Figure 2.1 Mutual Adjustment



One striking feature of Mintzberg's scheme is the position of mutual adjustment at both ends of the continuum: The first position represents informal face-to-face communication between fellow professionals; the last represents more sophisticated consultation procedures necessary for coping with complex tasks.

In professional organizations, the main coordinating mechanism is the standardization of skills; mutual adjustment gains value in an adhocracy; and direct supervision is highly valued in the more hierarchically organized schools.

In terms of coordinating mechanisms, the fit between educational processes and organizational structures is not only manifest in a structural sense, it is also expressed in cultural aspects and concepts of the people in the school. Teachers who value orderly classrooms with inflexible lesson plans tend to prefer well-defined organizations coordinated by prepared meetings, written agendas, and clear decision-making processes unaffected by unexpected circumstances. On the other hand, teachers who allow for more latitude in their classrooms tend to interact more informally with colleagues and can tolerate more flexible coordinating mechanisms (Morgan 1987).

RELATED THEORIES OF ORGANIZATION

Sociotechnical Systems Theory

Sociotechnical systems theory provides the basis for distinguishing the educational and organizational subsystems in CaMaPe. A sociotechnical system represents the interrelationship between the technology of the organization and its social components. Both are equally important in terms of the total system, but often they are weighted differently to reflect environmental influences.

Sociotechnical systems include both a technical component, the primary component in which production occurs, and a social component, in which both formal and informal human relations are taken into account. Both subsystems have characteristics of their own, influence each other in various ways, and seek functional equilibrium within an organization (Emery and Trist 1969).

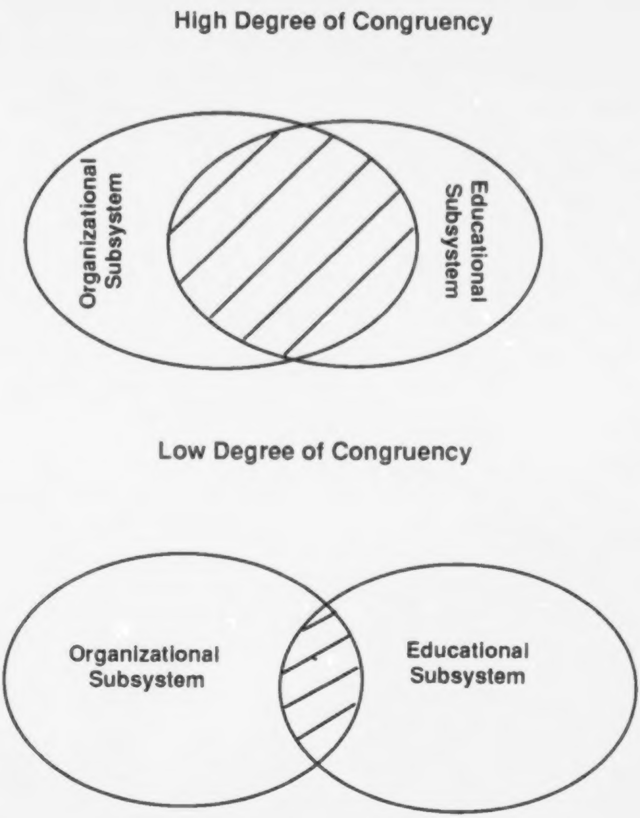
Two sociotechnical subsystems in a school can be distinguished as:

- an educational subsystem in which the primary education processes take place – instruction, learning, teaching, counseling, and testing; and
- an organizational subsystem that includes the social structures of the school – the formal relations, the peer relations, and patterns of communication and consultation.

The CaMaPe models reflect both subsystems, *with a primary focus on the way of organizing each*. Note especially that the educational subsystem represents the way educational processes are organized in the school rather than referring to specific practices occurring there.

Theoretically, in any school, a considerable overlap or congruence between the two subsystems should exist. In reality, schools reflect varying degrees of congruence between these two subsystems, which becomes significant information when a school is considering development. Figure 2.2 represents schools with high and low congruence between their educational and organizational subsystems.

Figure 2.2 Sociotehnical System


High Degree of Congruency
Organizational Subsystem
Educational Subsystem
Low Degree of Congruency
Organizational Subsystem
Educational Subsystem

Contingency Theory

Contingency theorists believe that there is no best structure for an organization but that an organization's structure must suit its functions. Mintzberg (1979) identifies and describes five parts of an organization: (1) the operating core where the basic tasks are carried out, (2) the middle line, (3) the strategic apex (line of command), (4) a technostructure (for example, word processing services and skills training), and (5) a support structure for indirect assistance of the operations (for example, cafeteria, payroll, mailroom). In Mintzberg's model, coordinating mechanisms – the social elements of an organization – are interwoven throughout each of the five functional parts and represent a fundamental component in the design of tasks, the flow of information, and the definition of responsibilities. CaMaPe builds on Mintzberg's theory but presents the coordination and functional aspects of the system as two separate subsystems.

3. FIVE EDUCATIONAL MODELS

INTRODUCTION

For many years now, but recently with even more intensity, much thought has been given to the question of how to design an integrated or truly comprehensive model of secondary education. The crux of the problem is not only how to account for and respond to different ability ranges but also how to establish consensus around very different opinions, views, and conceptions of education.

Research suggests that planning for diversity in education is frequently based on cultural principles and value orientations reflecting different concepts of humanity, philosophies of life, views on the relationship between school and society, and concepts of education itself. In other words, in any given national or local educational setting, there is likely to be a strong relationship between philosophy of life, educational goals, and the educational model that prevails in the schools.

An educational model is a coherent pattern or cluster of congruent educational processes that includes factors such as broad educational objectives, structures that support these objectives, curriculum content and design, specific student guidance objectives, student grouping patterns, testing and reporting methods, and evaluation of the instructional processes. Therefore, an educational model not only refers to grouping arrangements (such as tracks) for students, it also represents many broad educational processes and the variety of ways that student diversity is taken into account.

CaMaPe's five educational models are specific examples or prototypes of schools whose characteristics represent the preceding definition. They are based on both a study of educational literature and first-hand experience in numerous schools in several countries. Each model fits into the conceptual framework of organizations as described in Chapter 2. Their primary focus is differentiation and integration of educational provisions and processes. The components that comprise the models have model-specific definitions that fall along the simplicity/differentiation/integration continuum. A characteristic feature of the models is the consistency of their design. However, these five models are *prototypes*; in reality, schools include many variants of these models.

The five educational models progress qualitatively or developmentally along three dimensions:

- the capacity to individualize – to match students' needs, abilities, background, and other conditions with the educational provisions offered;
- the capacity to offer a cognitive and subject-specific program as well as a broader range of educational elements such as social and personal development programs; and
- the capacity to innovate – to enhance and develop the educational provisions of the integrated school.

UNDERPINNING RATIONALE OR PHILOSOPHY

There are many philosophies and theories of education, and each may influence any particular system in a school. The five models express or demonstrate different educational views; the particular theory underlying a specific model defines its subsystems and the definitions of its components.

For example, one philosophy of education suggests that the purpose of education is to produce an intellectual elite. If this is believed to be true, early selection of the most promising students is likely to be the norm and rigid tracking and clearly defined curriculum content are likely to be associated characteristics. Stringent achievement norms exist, and students must successfully master them. If they fail, students are likely to be transferred to an alternative and lower track whose norms and goals are regarded as more compatible. Obviously, the most important criterion of this system is early selection of the "fittest" students and their assignment to the "correct" educational route: one that is mainly cognitive and believed to match the students' intellectual capacity. The underlying assumption of this theory is that intellectual capacity is fixed and can be clearly diagnosed when a student is 11 or 12 years old. This view also assumes that intellectual capacity is general and that each student can attain consistent and equal achievement levels in very different cognitive fields such as mathematics, languages, science, and the arts.

In a school, these assumptions about students' intellectual capacity are most likely reflected in:

- grouping students to meet the main objective of careful selection and placement into the appropriate tracks;
- a highly cognitive approach to the curriculum with prescribed syllabi;
- clearly defined norms for achievement;
- a belief in categorization of intellectual ability (homogeneous grouping);
- little or no recognition of individual abilities other than cognitive or intellectual; and
- assignment of the best or most highly qualified teachers to high achievement-level tracks.

Some other theories of education support different views on students' capabilities. For example, another view is that intellectual capacity is developmental and subject to maturation (Mastman 1973, Esposito 1973). This view recognizes different cognitive capacities such as the differentiation between mathematical ability and a capacity for languages. This type of school defines cognitive categories but also provides opportunities to foster and develop individual strengths such as mathematical or social competence. Diagnosis of individual capacities and possibilities for transfer between different levels according to achievement become important. The school provides remedial support and student guidance services when they can enhance individualization.

A more flexible philosophy of intellectual growth and development recognizes different intellectual capacities within mixed-ability groups. Thus, opportunities are provided for students to learn at a level and pace best suited to their individual abilities. This applies to different subjects as well as to sections of a subject (Block 1976, Bloom 1976). Teachers must be aware of each student's cognitive and developmental capacity and regularly assess each student's needs and achievements in order to plan the best possible learning routes. They must possess both teaching and diagnostic skills to be able to cope with diverse ability levels within the same classroom. Teachers must also know how and when to allow students to work independently, individually, or in groups. A closely related educational philosophy purports that a good working climate in the classroom is a prerequisite for good learning. In this view of education, cooperation between and among students is a significant factor. Although still mainly addressing cognitive development, learning routes are less fixed, and time allotments for group learning can be flexible.

There is yet another philosophy about child development that is broader than just cognitive or intellectual development and includes a range of learning experiences related to affective, normative, social, and expressive development (Piaget 1966, Petersen 1961, Veltman 1974, von Hentig 1974). This is a more holistic view of development, so learning experiences are purposefully related to one another in order to enhance individual development. Teachers devote considerable time to other than cognitive objectives. They carefully observe students and discuss their growth and development, and they allocate time for student guidance, meeting individual interests, and the anticipation of problems. Testing and reporting are designed as feedback measures to help students progress. Teachers are primarily concerned with selecting the right learning experiences, setting objectives that are adjusted to individual development, and discussing with one another how well students are doing compared to their previous learning experiences. Learning and instruction take on much broader definitions.

Still another educational philosophy perceives students as agents of their own learning, individuals who can influence the content of the curriculum as well as determine the best learning course. Therefore, students decide on their own individual objectives (Brandt 1978, Winkel 1978). A student's natural condition (needs, wishes, and background), as well as what is actually happening in the classroom and in the outside world, is considered an important part of the curriculum program. Students are allowed and encouraged to learn from one another, thus reflecting a value held for social objectives. Teachers relate learning to reality and share their understanding of reality with their students to help them learn how to take control of their own destinies.

These examples illustrate different views or philosophies of education that reflect specific views of students and their intellectual development, the most appropriate type of curriculum, the most appropriate grouping patterns, relevant approaches to guidance, and the best modes of testing and reporting for particular educational purposes. The components and their specific definitions selected for the CaMaPe models are based on these educational theories and philosophies.

THE COMPONENTS OF THE EDUCATIONAL MODELS

The educational models have seven main components:

A. View of the student
B. General focus and structure of the curriculum
C. Organization of learning
D. Grouping patterns
E. Student guidance
F. Testing and reporting
G. Evaluation of teaching and instructional processes

We present each main component here, followed by the names of the subcomponents. In Appendix A, we define each component and subcomponent.

Component A: View of the Student

This component represents a general description of what the school believes the student is or should be.

Component B: General Focus and Structure of the Curriculum

This component relates to the curriculum content and how it is presented. The subcomponents are:

- B.1 focus of the curriculum
- B.2 connections between and within subjects
- B.3 time allocated for subjects
- B.4 how curriculum offerings are determined
- B.5 what outcome drives the choice of specific content taught within curriculum offerings

Component C: Organization of Learning

This component relates to how learning is organized, and its model-specific definitions reflect the underlying educational philosophies. For example, in a selective view of education, little attention is given to students' interests or to adjusting the curriculum to meet their needs. The norms are fixed, and students must adjust to them. The subcomponents are:

- C.1 dominant structures in which learning takes place
- C.2 teacher's repertoire of instructional approaches
  - C.2.1 number of instructional approaches
  - C.2.2 differentiation of instructional approaches according to student interest and learning style

- C.3 learning routes (the way students move through the curriculum)
  - C.3.1 number of possible learning routes
  - C.3.2 extent to which the schedules and paths of the learning routes are planned and fixed in advance

C.3.3 how students transfer from one learning route to another
C.3.4 extent to which requirements in the learning routes are fixed

Component D: Grouping Patterns

This component relates to how students are grouped, the regrouping procedures, and the criteria by which students are assigned to classes and teachers. The subcomponents are:

D.1 dominant grouping patterns
D.2 extent to which students belong to a fixed home group for learning and guidance
D.3 amount and rationale for regrouping systematically in home groups
D.4 basis on which students are assigned to teachers

Component E: Student Guidance

The model-specific definitions for this component are very closely related to the underlying philosophy of education. For example, student guidance is not very important in a school where student selection and allocation to tracks is critical. However, a school that values the development of all aspects of an individual places more emphasis on student guidance.

E.1 function of the system of student guidance within the school
E.2 amount of time that teachers devote to student guidance
E.3 relationship between student guidance and teaching and learning
E.4 responsibility for student guidance

Component F: Testing and Reporting

This component refers to the testing program in a school. Testing is either prognostic to select students for streams or tracks, diagnostic to get information on how to proceed with the curriculum program, or feedback oriented to give students information about how well they have done in light of their individual objectives. The subcomponents are:

F.1 what is being tested
F.2 use of test results
F.3 form and contents of the student report
F.4 responsibility for student report preparation
F.5 reference point for comparisons (in the tests) and implications for students

Component G: Evaluation of Teaching and Instructional Processes

This component refers to the underlying purpose for an evaluation of instructional processes. For example, evaluation may be done to determine if better methods for selecting students are necessary or to decide if adjustment of the curriculum to better meet the students' needs is required. The criteria for evaluation and the person who serves as evaluator vary across models. The subcomponents are:

G.1 existence and use of the evaluation of the process of education
G.2 responsibility for design and conduct of the evaluation

THE FIVE EDUCATIONAL MODELS

In this section, we describe the five educational models in detail. For each model, we give most of the component and subcomponent definitions.

Model I: The Selective Streaming Model

The main characteristic of this model is that a number of distinctly streamed or tracked classes exist under one roof. Ideally, students are allocated to these vertical tracks based on their intellectual capacity, which is determined through either some form of standardized assessment or an initial student assessment period that can last from several weeks to one year (**component A**). However, in reality, either the assessment does not occur or it serves little purpose because there is selective admission of students followed by their permanent placement into homogeneous classes.

The regulatory norms (selection and tracking thresholds) are strictly defined and enforced in order to regulate the flow of students. Transfer of students from one track to another is restricted; transfer flow from a higher to a lower track is much easier than the reverse, which is practically impossible (**component C.3.3**).

Cognitive, subject-specific instructional methods and learning goals are emphasized in *all* tracks. The higher tracks have objectives and goals that are more difficult and more demanding than the lower ones. The curriculum differs across the numerous tracks – some subjects are offered in all tracks, but some are specific to either the higher or lower tracks (**component B.5**). In the Dutch educational context, the higher stream gives the student access to a university; the lower ones do not. In the American context, only specific tracks offer the courses required for admission to a college or university.

The content of the curriculum in a selective streaming school is traditional, which means that it is derived from a common body of knowledge and that there are limited connections between the different subjects (**components B.2 and B.4**). Other features of this model include:

- There is little continuity between subjects within a particular stream, and there is minimal longitudinal planning of teaching material, as well as limited agreement about the curriculum across year groups (**component B.2**).

- An educational route is chosen for students on their admission to the school (**components C.1 and C.3**).

- The norms for the regulation of student flow (selection and tracking) ensure that students are closely matched with one another within the various classes (**component C.3.4**).

- Transfer of a student from one track to another after the assessment period functions solely as a corrective measure for faulty selection or streaming. It is usually downward (**component C.3.3**).

The students are grouped in classes or intact groups for the duration of a school year (**component D.3**). The same students are collectively taught in all subjects, and all students are expected to progress to approximately the same point in these subjects (**component C.2**).

From the student's point of view, there is virtually one learning route: the assigned track. The requirements and norms are fixed, and students either pass or fail. In some schools, when students fail, they work for another year in the same grade; failure for a second time results in transfer to a lower track. To be considered successful, the student must maintain at least an average achievement level (**component C**).

Student guidance is supposed to provide support for tracking processes. However, in reality, it often functions merely to correct students' behavior or maintain discipline (**component E**).

Student testing and reporting focus on cognitive achievement and are used either to select and allocate students to tracks or to make pass/fail decisions (**component F**). To determine whether there is a need for refining the selection and streaming procedures, a review of students' performance is done, and it becomes the basis for the evaluation of educational processes (**component G**). Evaluation of educational processes is concerned with issues such as:

- Is there a clear focus on cognitive subject knowledge at several test levels?
- Are there uniform learning routes for students (minimal individualization)?
- Are students efficiently matched to the teaching/learning situations?

An Example of a Selective Streaming Model

This example is from the Dutch educational context, but similar situations exist in other countries. The German Kooperative Gesamtschule and the English multilateral school are two other examples of the same model. In the Dutch context, the following streams exist in a school, and students are selectively assigned to these streams based on demonstrated achievement capabilities:

- Gymnasium is a six-year, preuniversity curriculum course that includes Latin and sometimes ancient Greek as subjects.
- VWO is another six-year preuniversity curriculum course. Both Gymnasium and VWO have a national examination covering seven subjects. A student who passes this exam is granted admission to a university.
- HAVO is a five-year curriculum course with a national examination covering six subjects and grants admission to higher vocational education but not to universities.
- MAVO is a four-year curriculum course with a national examination covering six subjects and graded at two levels. The higher of these levels grants admission to senior vocational education (not higher vocational education or universities) or to the upper grades of HAVO. Students who pass their exams at the lower level go to an apprenticeship system or into the labor market.

It is common practice to allocate students to one of these streams on entrance into, or soon after entrance into, a school. These streams are comparable to the college-prep, business, and vocational/technical tracks in American schools.

Model II: The Setting Model

In a setting model, students are assigned to curricular tracks as they were in Model I schools, but students may participate in both mixed-ability groups for some subjects (such as social studies, physical education, and electives) and equal-ability groups for core subjects (such as science, mathematics, and languages). Students may be assigned randomly to mixed-ability groups, or student assignments may be made to meet requirements for a proportionate distribution of students based on social class, gender, or intellectual aptitude. Student allocation to a specific equal-ability group is based on assessment tests in that particular subject. Usually, there are three main ability levels (A, B, C) per subject, and students can be assigned to a different level in each subject. Students can change levels (either up or down) on the basis of their attainment and progress, but often there are a limited number of opportunities to do so, and these may be at fixed times during the year. This means that for a set number of periods per week each student is in a permanent mixed-ability group and, for the other periods, in homogeneous or equal-ability groups. In most larger American secondary schools, both the heterogeneous and homogeneous groups can change yearly. In most European schools, the groups remain intact for a number of years. Counseling activities and tutoring sessions take place in the mixed-ability groups (**component C.3.3**).

As a label for this model, "setting" refers to students grouped in sets or ability levels. Its underlying educational philosophy is a cognitive learning concept with strong emphasis on:

- students maintaining an acceptable achievement record;
- teaching traditional subjects such as mathematics and language in equal-ability groups;
- retaining the content and cognitive objectives of traditional education;
- setting clear boundaries between the various subjects and the types of learning experiences; and
- vertically arranging subjects with an orientation toward the final examination (**component B**).

In this model, student guidance supports subject teaching and learning and has varying degrees of importance at the different ability levels (**component E**). Most student guidance activities occur in the heterogeneous groups, and students can be assigned a guidance counselor for their high school career. In these heterogeneous groups, counselors provide some assistance with learning skills and some remedial assistance, but if a student needs intensive remedial support to, for instance, allow transfer to a higher level or close gaps in understanding, the counselor signals the appropriate subject teacher.

In principle, testing is diagnostic; it is used to assign students to a particular level in each subject (**component F**). The evaluation of educational processes focuses on students' performance in order to assess the appropriateness of the existing curricular tracks and their ability levels, as well as the transfer procedures between these levels (**component G**).

An Example of a Setting Model: The Berlin FEGA Model

The Berlin FEGA model is a school comprising grades 7 to 10. The goal of this model is to appropriately adjust the curriculum to meet the aptitude, pace, and mode of learning of individual students.

The FEGA model has four courses or streams:

- the F-kurs= Fortgeschrittenen-kurs (advanced stream);
- the E-kurs= Erweiterungs-kurs (enrichment stream);
- the G-kurs= Grund-kurs (basic stream); and
- the A-kurs= Anschlusz-kurs (connection stream).

Initially, students are grouped according to their ability in each separate subject. Students work in mixed-ability groups for the first six months of the 7th grade. After this six-month period, the students are assigned to the various streams (equal-ability groups) based on their pace of learning and scholastic achievement.

In the FEGA model, a basic curriculum unit is called a Fundamentum (the different topics, chapters, or units that must be covered in a specific subject). All streams in the 7th and 8th grades deal with an equal number of identical Fundamentums. In the basic stream, only the Fundamentums are completed; in the enrichment stream, the students are given additional content or experience; and in the advanced stream, the pace is even faster, and students are given extra units. The connection stream is a remedial level where attempts are made in small classes to bring students to the same level as those in the basic stream.

The principle of having all the different streams start on the same Fundamentum is discontinued in the 9th grade. The pace in the enrichment and advanced streams gets considerably faster, which means that more Fundamentums are covered. Transfer from one stream to another is possible at six-month intervals. In the 7th and 8th grades, these transfers are allowed without taking any special measures since all students assimilate the same Fundamentums. In the 9th and 10th grades, it is more complicated because the number of completed Fundamentums varies considerably. Students must participate (in their leisure time) in "catch-up" programs to move into a more advanced stream.

Model III: The Mixed-Ability Model

In the mixed-ability model, student work is done in mixed-ability groups in all subjects. For a number of subjects (such as mathematics, foreign languages, science) the subject material is divided into units, and each unit lasts a certain amount of time (approximately five weeks). During this time, all students collectively work on the basic unit. A diagnostic test, given when all students indicate they have completed the unit, measures the degree of student mastery of the basic objectives within the unit. Student outcomes determine whether each student gets additional content and enrichment materials or remedial material and assignments. Within the classroom, students are regrouped into "reviser" groups for remediation or "enricher" groups for advanced material, so the class is maintained as an entity (**components D.2 and D.3**). After a short period of either revision or enrichment (working individually or in groups), all students collectively start work on the next basic unit. In principle, this next unit starts only after all, or nearly all, students reach mastery of the basics (**components C.3.1 and C.3.3**).

Similar to the setting model, the mixed-ability model focuses on cognitive learning and places emphasis on:

- the cognitive objectives of education;
- teaching the content of traditional education;
- clear boundaries between the various subjects and between curriculum content units; and
- a vertical arrangement of the subjects oriented toward the final examination (**components B.2 and B.5**).

However, there are some differences between the two models. The mixed-ability model places more emphasis on mastery and the special functioning of the student in the classroom; in fact, it considers appropriate functioning in the classroom a prerequisite for effective instruction and learning (**component E.2**).

Small group work and individual differentiation are very important and receive considerable attention. There are numerous learning routes for students, and these routes are less fixed than in the two previous models. If necessary, more time can be spent on the basic curriculum unit or on enrichment (**component C.3.2**).

Subject norms and requirements are determined in advance so that teachers use the same objectives for all the same subject classes. However, teachers can and do use different learning routes and different instructional methods to meet these requirements (**component C.2.1**). Although norms and requirements are set in advance, they are not totally fixed; if the whole group underachieves on any basic unit, more time is allocated than originally planned, or norms are adjusted. Norms are more relative, and individual achievements may be compared to the whole group (**component F.5**).

Cognitive achievement is the focus of testing and reporting; therefore, tests are diagnostic rather than prognostic. Diagnostic testing is done to determine student mastery and to discern what additional materials are required to enhance learning (**component F.1**). Student reports indicate which basic units and enrichments are mastered.

In this model, student guidance services are relatively important. Rather than being corrective, guidance is directed toward teaching students personal and social skills. Guidance services focus on methods for improving cooperative learning because students must work both independently and in groups. Often, there is considerable regrouping within the classroom, so relationships among students and a good working climate are considered prerequisites for learning; both teachers and guidance staff are expected to focus on improving group and social skills (**component** E).

Evaluation of educational processes focuses on the implications of student performance for adjustment of basic units and tests (**component** G).

The Cognitive Learning Concept of the Setting Model and the Mixed-Ability Model

Both the setting model (II) and the mixed-ability model (III) are based on cognitive learning concepts. And although there are many differences between the two models, they share two similarities:

1. They provide students with more learning opportunities. In these models, equal opportunities mean equal opportunities for equally gifted students. The setting and mixed-ability models include other options:

    - providing for the transfer, flow, and mobility between different levels of attainment;

    - detracking students;

    - avoiding stigmatization of low achievers;

- avoiding placing lower socioeconomic students at a disadvantage; and
- taking more account of students' individual capacities for achievement.

2. They meet objectives for social equality by:
    - abolishing the traditional types of schools in secondary education;
    - teaching children from all social strata in mixed-ability groups; and
    - teaching all students in the same building.

By doing this, teachers and administators hope that students get to know one another, begin to cooperate, and learn to accept diversity. These social processes are considered important, but unfortunately, both models are less than satisfactory in this respect (Bernard 1976).

Toward Another Learning Concept

Models I, II, and III all reflect the same general cognitive learning concept although they differ from one another considerably on specific components. Another general learning concept is reflected in the next two models. The underlying values of this learning concept include:

- placing priority on individual development of the student in the cognitive, expressive, normative, and affective sense;
- offering alternative learning situations and routes for the benefit of students' personal development;
- observing students and adjusting the curriculum to meet students' needs and circumstances;

- tailoring learning routes and school careers as much as possible to the individual;
- planning and delivering learning experiences so as to make the world itself become part of the learning experience;
- placing equal value on student guidance and subject teaching; and
- giving teachers a role in student guidance.

Model IV: The Integrative Model

This model emphasizes individuality, individual development, and independent learning. Curriculum and learning experiences are very different from traditional offerings, and the content differs considerably from the previous models. Two relatively important features are the new role of the teacher as "designer" of curriculum for individual students and the fact that students are now in permanent home groups and regrouping rarely occurs (**component D.2**).

The concepts of the integrative model are not strictly defined, but they are visible in a variety of processes. The teachers decide what elements of students' developmental levels and needs are relevant and what topics are of current interest. Guidance plays a significant role in providing teachers with knowledge about student placement, interests, and abilities (**components E.3 and E.4**).

The pedagogic goals and views are fairly explicit. Curriculum content and its composition are based on child development theories that regard the whole student as important (**component B.5**). Educational provisions focus on personality development, paying equal attention to the development of cognitive, affective, normative, and expressive skills (**component A**). Subject-content and developmental elements are clustered together, reinforcing individual and social growth (**component B.1**). Learning routes and curriculum content are designed to stimulate students' curiosity and interest. Learning clusters are created to allow for a variety of learning routes and for individual progress through these learning routes.

This model assumes a strong relationship between instruction and guidance (**component E.3**), which indicates that the teacher's role has undergone a drastic change from the previous models (**component E.4**). Guidance services focus on the social functioning of the group, the full functioning of the student in the group, and the student's individual development within the group. Guidance processes are not isolated from curriculum processes, nor is the curriculum isolated from real-life situations. Guidance services help students select the most appropriate curriculum and help adjust the curriculum to meet the students' needs. This "custom fit" is obtained through observation, talking with students, testing, and consultation and agreement among teachers.

Student guidance services recognize student diversity by setting goals that focus on issues related to personal growth and the general well-being of the student (self-confidence, independence, reflection). Since these personal goals are set independently from subject teaching goals, an inherent tension exists between the student guidance system and the curriculum system. Different and conflicting requirements can emerge, and mutual adjustment can become difficult. It is critical that curriculum and guidance be closely connected because seeing the student as an individual results in a more open and flexible curriculum, which in turn, influences students to learn in their own way and to set certain objectives for themselves.

Achievement requirements and norms are not fixed, so a variety of learning routes are acceptable, as are a variety of outcomes (**component F.1**). Testing and reporting focus on diverse performances and achievements of the individual. Tests are diagnostic, providing feedback to the students about how they are progressing and giving information to teachers about how to proceed. Students assess themselves and offer their perceptions about their own development (**component F.5**); students are also encouraged to offer their opinions about teacher performance (**component G.2**). Not surprisingly a tension frequently exists between the school's educational objectives and practices and the final examination requirements dictated by an external authority.

Evaluation of educational processes focuses on the actual functioning of the educational process and on teacher performance, both in terms of guidance and teaching/learning designs (**component G.1**).

An Example of an Integrative Model: Von Hentig's Laborschule

Only a few comprehensive schools and some schools with special objectives or identities present features of the integrative model. An example exists in Western Germany, the "Laborschule," which is based on the educational concepts of Von Hentig. On the basis of an analysis of present-day society, Von Hentig formulated 13 general educational objectives, including:

- ability to live in a fast-moving world;
- ability to live in a world characterized by labor division and specialization;
- ability to live in the rational world of science and technology; and
- ability to live in the consumer society.

Von Hentig believed that these general educational objectives should be addressed in a variety of curriculum areas such as social studies, science, languages, mathematics, and perception and design.

Based on his theoretical views, Von Hentig was given the opportunity to implement his design in a Laborschule for 5 to 16 year olds (a comprehensive school) and an "Oberstufenkolleg," a college for 16 to 20 year olds. In the Laborschule, students are generally placed in comparatively permanent home groups and in permanent classrooms. Instruction centers on experience units, educational topics that address real-life situations. Students from 9 to 11 years old are taught in optional groups in specially equipped rooms in which a cluster of subjects (science, language, social studies) are brought together. This method is continued for ages 12 to 16. An attempt is made to instruct students collectively as much as possible and to satisfy any special needs for learning through supplementary provision.

The curriculum areas are all obligatory, but students have a choice among subjects within an area (for example, a selection from a science cluster that includes biology, chemistry, general science, physics, and geosciences). The choices students make can be based on external requirements, personal preferences, motivation, or didactic considerations.

Model V: The Innovative Model

The student in an innovative model is viewed as an active member of the school (**component A**). The curriculum is relatively open, so students and teachers are assumed to be participants in its construction and revision. The curriculum content (subjects) is strongly interrelated with the goal of eliminating all barriers between all subjects while making the content meaningful to teachers and students (**components B.1 and B.2**). These vague boundaries allow teachers and students to establish connections between the various areas of knowledge, skills, and experiences through project and theme teaching on topics of interest (**component B**). Subject units are not strictly defined, and students and teachers influence the number and types of learning routes available (**component C.3**). In this model, counseling and remedial teaching are viewed as part of the context.

The basic organizational principle is the pedagogic unit, which consists of a group of 60 to 100 students (about three traditional classes) of the same grade along with a team of six to eight teachers. The students are placed in small (four to six students), permanent mixed-ability groups that remain intact over a number of years. (These groups are formed based on an assessment period of three to six months.) To provide for stable social relationships among students and between students and teachers, regrouping rarely occurs unless the group is severely dysfunctional (**component C**). Group processes play an important role both in learning conditions and in the curriculum content itself.

Ideally, the pedagogic units design their own curriculum and timetable (within the organizational framework of the school and the legal regulations) and learn to cooperate with other pedagogic units in projects with common needs and interests. Student guidance is integrated into the curriculum, both in terms of time (there are no separate periods) and staff (there are no separate counselors; every teacher is a counselor). Guidance supports the functioning of the small group and focuses strongly on integrating social processes (**component E**).

An Example of an Innovative Model: The Holweide School

In the early 1970s, in Gottingen, Western Germany, a group of social scientists and educators were given the opportunity to design a new school in one of the suburbs of the city. They began by studying existing schools both in their own country and abroad.

As they developed their new school, they wanted it to be one where:

- children of all social classes and learning abilities would be in one school and work together;
- the anonymity of a large school would be reduced;
- teacher cooperation and collaboration would be supported; and
- both academic and social learning would be fostered.

They invented a new educational model called Team-Kleingruppen-Modell, or Team Small Group Plan. The Holweide School in Cologne, Germany, is a well-elaborated example of the innovative model:

- Teachers work in teams of six to eight teachers with 90 students.
- Each team of teachers and students stays together for six years from grades 5 through 10.

- Students work in heterogeneous cooperative groups.
- Teachers are responsible for counseling and guidance as well as for teaching academic subjects.
- The head teacher, deputies, and elected governing panel play a coordination role that is more than one of control or supervision.

4. FIVE ORGANIZATIONAL MODELS

INTRODUCTION

Schools today are trying to find better ways of organizing their structures. In doing this, they ask such questions as:

- What communication or decision making model will suit us best?
- Is there a general structure that we can effectively adapt to our specific situation?
- Does a democratic organization exist, and can it be applicable to this school?

Both practitioners and researchers have attempted to find the answers to these and other questions — the practitioners questioning the usefulness of theories and the researchers trying to make simple models out of confusing and complex realities.

No one way best describes a school organization; it depends on the dynamics of environment, internal capacities, and educational goals. Organizations, including schools as organizations, can be described in many ways. For example, Morgan (1986) describes organizations using metaphors such as a mechanical clockwork, a brain, or a power game.

Organizations can also be structured in various ways, and organizational models provide a means for looking at these diverse structures. An organizational model serves as a coherent pattern or cluster of congruent elements that support the goals of a school. The CaMaPe models are specific examples of an organizational model and include how to support or cope with:

- The educational models, as described in Chapter 3.

- The environment, which includes such elements as parents, the community, requirements for higher education, and geographic location.

- The internal capacities of the school, which include:
    - the capacity to provide educational processes in flexible combinations: *capacity for flexibility*;
    - the capacity to provide educational processes along a range from simple to complex: *capacity for complexity*; and
    - the capacity to develop processes of organizational change from a superficial to a more profound level: *capacity for organizational development.*

The five organizational models that we describe in this chapter show an incremental ability for meeting each of these capacities, moving from Model I to Model V. For example, related to flexibility, the first organizational model (the segmental model) has limited capacities and can support combinations of only relatively simple educational processes and relatively superficial change processes. This model allows for only minimal levels of individualization or differentiation of learning and only with an emphasis on cognitive skills. For a segmental school to undergo even minor changes is rare. We can also safely assume that a Model I school demonstrates superficial levels of the other capacities. For example, most often, there is little or no demand by parents or the community for other than traditional educational processes, nor is there much inclination among teachers or administrators to change the type of educational provisions offered.

UNDERPINNING RATIONALE OR PHILOSOPHY

A school is a professional organization. Historically, the school as a professional organization arose from "craft-learning" or master/student relationships that were based on acquisition and understanding of inherent skills and knowledge. During this time, school organizational structures scarcely existed; rather, they were relationships between master and students that comprised simple organizations with minimal formal structures. In modern society, when schools became institutions approved and demanded by society, new bureaucratic management elements were introduced to construct and stabilize schools' organizational structures. These bureaucratic organizations included the rationalization of work processes, especially management systems and clear authority lines.

The mix of the two approaches (professional organization and bureaucratic management) form the professional bureaucracy that is the basis for modern school organization in Western culture. However, different cultures emphasize different aspects of school organization. For example, in the Netherlands, the professional aspect is prominent, whereas in France and the United States, the bureaucratic aspects are more important.

There have always been people opposed to professional bureaucracy who challenge the rigorousness of standardization and hierarchical imposition, just as there have always been those who do not fit into any professional pigeonholes. One opposition group led to the development of an organizational theory stressing human relationships, including openness, communication, and work enhancement and design. The other opposition group led to a school of thought emphasizing the ability of people to state their own objectives, values, and strivings, even if there is no way of accomplishing them. Both these approaches more strongly emphasize the personal, rather than the structural, side of the professional bureaucracy.

Contingency theory, which we introduce in Chapter 2, is a recent organizational approach that offers a more comprehensive way of dealing with both the personal and structural aspects of an organization. Contingency theory supports the construction of the most appropriate fit between organizational structures and relevant internal and external elements.

These organizational theories are the basis for the CaMaPe models. Elements of a professional bureaucracy can be found in those schools housing low levels of task differentiation (teachers performing one specific task – teaching). The organizational structure of this kind of school which is relatively segmented is called a segmental model (Model I). In some schools, a higher or increased level of task differentiation requires more structure or direction and causes a strengthening of the bureaucracy or hierarchy. This is called a line-and-staff model (Model II). On request, the staff (middle management) provide information to the line management. Some schools cope with higher levels of differentiation by adapting or embracing more human relations elements, which increases the power or influence of the teachers. This is called a collegial organization (Model III).

The elements of contingency theory will be paramount when the environment has an impact on the school (for example, recognizing students as clients to be served). A new blend of objectives and practices emerge, which leads to more complex ways of organizing the school. Now, the fixed professional and bureaucratic sides begin to fade away. This is called a matrix model (Model IV). When the strivings and actions of students and teachers are seen as more important and the voice of parents and the local community are heard more, it leads to a more flexible organization. This is called a modular model (Model V). In this model, small group dynamics (interactions and communications) determine the organizational structures that become a response to an open curriculum and the acceptance of the diversity of students.

All five organizational models are constructed from classes of components that are taken from these organizational theories. In some instances, the component definitions may be strikingly different for each of the five models; in other instances, the differences may be slight or even non existent. These degrees of difference reflect the degree of overlap of the specific models theories.

Keep in mind that schools in development do not necessarily progress naturally along a path through these five models. Societal influences, norms, and culture can force schools to change in a variety of directions or remain stuck in one model for many years. Often, development or change occurs in response to a crisis in the existing structure (Greiner 1979) so that a school may skip one or two of the models.

THE COMPONENTS OF THE ORGANIZATIONAL MODELS

The five organizational models are constructed from the following four classes of components:

Class 1.	Organizational structures
Class 2.	Coordinating mechanisms
Class 3.	Governing body and management
Class 4.	Complexity of the organization

A school, like other organizations, can be defined by its division of labor or differentiation of tasks and its subsequent need for coordination. Organizational units are formed and relationships built between these units because of the division of labor. So, it is logical that the first class of components represents organizational units, and the second class represents coordinating mechanisms that relate to these units.

The third class of components relates to governance and management and deals with coordination that is more remote from the basic work of the school (for example, policies set by the school board). The fourth class of components refers to the level of staff awareness and understanding of the school as an organization rather than to a collection of individual needs and perceptions. In Appendix B, we define each component and subcomponent.

Class 1: Organizational Structures

Each organizational structure can be described on one of two levels:

- Groups of workers fulfilling certain functions such as instruction or guidance. The first five main components and subcomponents address this level.

- Individuals fulfilling certain functions such as instruction or guidance. Component 6 (the teachers) is the only component of this kind. Other individuals within the organization are addressed within the group components (tutors) or within the management components (principal and assistant principal(s)).

The description of schools through the use of models is kept relatively simple by characterizing them on a "group" level. However, the professional character of a school necessitates defining teachers as individual organizational units. Of course, this does not exclude them from the group level; in fact, most of the units at the group level consist totally or largely of teachers, either in their teaching role (the educational sections and the departments) or in other roles (the guidance and developmental units).

The components referring to the organizational structures are as follows:

Component 1: Educational sections

1.1 primary organizing principle
1.2 size of teaching and learning structures
1.3 autonomy of teaching and learning structures

Component 2: Subject departments

2.1 teacher sense of connection or identification with department
2.2 impact of departments on school functioning
2.3 decision-making function of departments

Component 3: Office of administration, finance, and other support services

3.1 responsibilities
3.2 parts of the organization to which services are provided

Component 4: Student guidance departments

4.1 core function of guidance department
4.2 staff with guidance responsibilities

Component 5: Educational development

5.1 focus of educational development
5.2 who is initiating the educational development efforts

Component 6: Teachers

6.1 amount of teacher autonomy
6.2 teacher's view of the activities of and need for student guidance

Class 2: Coordinating Mechanisms

Component 7: Regulations and guidelines

The standardization of educational work processes is usually determined by regulations either internal or external to the school. The standardization of output is usually controlled by external rules and policies relating to such things as certification standards for teachers or standardized examinations for students.

7.1 externally imposed
7.2 internally developed

Component 8: Professional skills

Professional skills, in terms of the degree to which these skills are standardized, represent a coordinating mechanism. All teachers have had preservice training on how to do their job according to accepted professional standards.

Component 9. Hierarchical supervision

Direct supervision can occur only in very small schools, so hierarchical supervision includes monitoring school procedures and rules. The importance of hierarchical supervision varies across schools.

Component 10: Consultation and communication structures

Consultation and communication structures (both formal and informal) relate to information flow and information gathering. The schoolwide communication/consultation structure implies mutual adjustment and, as a coordinating mechanism, can be more or less formalized in the school. Consultation (for reaching mutual adjustment and consensus) can be an important mechanism in situations where teachers have strong autonomous positions; it can also be important (in a different way) in schools with dominant hierarchical structures.

10.1 number of different structures for consultation and communication
10.2 nature of decision making
10.3 main communication group

Component 11: Culture

The concept of culture within a school encompasses a wide variety of assumptions and convictions about the world, life, society, school, humanity, and the best conditions for educational and personal growth. People in schools express culture in many diverse patterns and behavioral tendencies. Like professional skills, culture embraces internalized standards. Teachers often differ strongly in their views and values but have a pragmatic belief in working together despite differences. As the school develops toward higher organizational capacities and more individualized education, culture can gain major significance.

Class 3: Governing Body and Management

School management and administration and the policy board might also be seen as organizational units. They are discussed separately because their main function is coordination using various mechanisms. Although they play a secondary role in the daily routines of a school, their influence on the functioning of a school is significant, so special attention must be paid to them.

Component 12: Role of governing body

The ultimate authority of a school rests with one governing body, the school board which represents public authority. The governing body sanctions all proposals put forth by the school as long as finance permits. The board may view its task as rather limited, merely controlling the material resources or perhaps the human and social conditions of the school. The school board may, however, view its task much more broadly to include input into educational policy decisions and development of a school vision.

Component 13: Management

Management refers to the persons responsible for overseeing all management tasks in the school, most often the principal and the assistant principal(s).

13.1 responsibilities of the principal
13.2 power base of the principal
13.3 responsibilities of the assistant principal(s)
13.4 who reports to the governing body

Component 14: Existence of middle-management position

Middle-management functions are most often positioned in a variety of places and performed, usually for limited periods, by a variety of teachers (for example, department head or team leader).

Class 4: Complexity of the Organization

The following two components are interrelated. The staff's awareness and understanding of the school as an organization effects the functioning of the school. The degree of complexity of organizational structures found in schools (**component 15**) represents the degree of awareness about organizational structures among staff (**component 16**). That is, awareness is a cultural element, so organizational structures can be replaced by higher organizational awareness. If teachers understand the need for organizational mechanisms, there is less need for detailed rules and procedures.

Component 15: **Degree of complexity**

Component 16: **Staff awareness of, or identification with, the school as an organization**

THE FIVE ORGANIZATIONAL MODELS

In this section, we present the five organizational models. The first model we describe most extensively. We then describe each consecutive model by specifying how it differs from the preceding one. This avoids repetition, but more important, it emphasizes the developmental character of the sequence of models. We present both the basic and the underlying assumptions for each model, along with most of the model-specific values for the components.

Model I: The Segmental Model

The primary organizational feature of the segmental model is the autonomous position of the subject teachers (**component 6.1**). Every subject teacher in a segmental school is free to choose and practice an individual instructional approach. This freedom applies to lesson preparation, mode of teaching (content, form, and material), student assessment practices, and the type and degree of student guidance provided. A subject teacher is not obligated to perform any duties other than teaching assigned classes.

Each educational section in a segmental school represents a curriculum track for students (college prep, business, vocational, special education). Usually, students are assigned to a specific curriculum track for their high school career (**component 1**); teachers are also assigned to these tracks. Obviously, this structure serves to isolate teachers from those outside their track. However, isolation also occurs within the track because, most often, there are not even organized teams of teachers within these sections. If any groups do exist, they are usually not connected to one another or to any central focus or purpose.

The primary coordinating mechanism in a Model I school is the professional skills of the subject teachers (**component 8**). That is, individual teaching performance is based on individual teaching skills. In fact, an unspoken and respected norm says that teachers do not violate the privacy of one another's classrooms.

The secondary coordinating mechanisms are the explicit school rules that define the limits of teachers' autonomy. These include:

- external rules or standards set by state-level policies that are related to such things as the curriculum, graduation standards, and examination requirements (**component 7.1**); and
- internal school rules or standards established and enforced by the school board and administrative body (**component 7.2**).

Culture (**component 11**) is not a powerful coordinating mechanism in a segmented school. However, one characteristic or strong common value does exist. It is accepted that each teacher has his or her own convictions about humankind and society that have implications for teaching. One does not normally pressure a colleague to make these convictions explicit.

In a Model I school, the role of the principal (**component 13**) includes the following:

- ■ The principal performs administrative functions such as attending to budget and funding matters, appointing personnel, and looking after legal issues with support from a small financial/secretarial section.

- The principal has almost total responsibility for operations and facilities, answering directly to the superintendent and the school board. This guarantees the principal a voice in all decisions concerning building operations and school facilities.

- The principal occupies a complicated intermediary position between the teachers and the superintendent or policy board. In relation to teaching, the principal is accountable to the district, state, school board, and parents for what happens in the school. However, the principal exercises limited direct authority over subject teachers, formally intervening if teachers are obviously negligent or indirectly exerting influence by promoting some educational activities or obstructing others through his or her control over the use of resources. The principal can also intervene by using his or her prestige over the teachers. Consequently, this type of management is called **distributive management**.

Most often, a segmental organization has at least one assistant principal in a supporting role to the principal (**component 13.3**). Organizationally, this position has little significance. Teachers approach the principal directly, not considering the assistant principal an independent level of management. If a specific school gets significantly larger, the assistant principal may be given full responsibility for an educational section (for example, vocational education), providing more opportunities to exercise independence and leadership over these "subschools." Extensive growth of the school may have another effect – if authority is delegated to an assistant principal to lead a subschool and he or she begins to practice management functions according to guidelines issued by the principal, the contours of a line-and-staff model begin to develop.

The structure of a segmental school, comprising a number of sections with little connection to one another, is not amenable to the existence of communication processes and even less so to consultation mechanisms (**component 10**). This is best illustrated by the relationship between, or more accurately division between, administration and teaching. For example, any change or school development is the direct result of interactions between the principal and superintendent and school board; teachers are not directly involved in the visioning or planning process. Teachers themselves most often operate in isolation from one another, requesting or receiving resources based on their individual needs. Consequently, decisions about acquiring new resources and introducing innovations or development plans have an ad hoc character. In other words, there is no clear policy for obtaining and implementing resources through joint decisions by school boards, superintendents, principals, and teachers.

Even the teachers display the character of a segmental school. Teachers practice their own individual instructional method or teaching approach within the scope defined by school improvement programs and other available support resources. Student assessment is left to the individual teacher, as is the assessment of the way each teacher fulfills his or her own teaching duties. Teachers have little knowledge about one another's skill; all they know is that they all are trained to teach.

Teachers have no formal obligation to cooperate within their subject department (**component** 2). Through relatively informal meetings, they try to reach agreement about such things as the allocation of classes, the common use of books in parallel classes, and problems of scheduling. Staff meetings for *all* teachers are held to decide about such things as the criteria for admission of new students, preparation of student reports, and the promotion of students to the next class.

For a segmental school to function adequately, it is very important to select students according to ability and to place them in the correct track or ability group. Therefore, the school pays some attention to career or vocational consultation – helping students with their subject choices, finding the most suitable class or the best subject groups, or facilitating the most appropriate class transfers. The school employs teachers or counselors who have specialized knowledge and skills in this type of guidance (**component** 4).

In only the most general sense are teachers obligated to perform the role of a tutor. There is no formal description of this tutor/guidance role, so frequently, it is fulfilled at a minimal level. Consequently, the school has only a limited capacity for remedial or corrective guidance such as coaching students who perform inadequately. For remedial guidance to occur, communication and cooperation are necessary, for example, in referral to a counselor by the teacher or exchange of information about a student between the counselors and the appropriate teachers. Since these contacts don't fit in the minimal consultative structures of the segmental organization, this type of guidance service depends on the individual goodwill of teachers (**component 6.2**).

The character of a segmental school is invisible to the outside community because the school "closes" itself off from its environment. What little contact there is with parents is usually about their own children. The community has no input into the daily operations of the school or the focus of the school's vision. In fact, the school has few mechanisms in place to allow it to easily respond to stimuli from the outside.

The stability of the segmental organization model lies specifically in its disregard for reaching policy decisions that are a reflection of the whole school system. Various bodies – both persons (teachers, principals) and groups (staff meetings, school board) – have relatively autonomous responsibilities, so they can do the work expected of them with minimal communication or consultation with others. Sometimes this type of school organization is referred to as a loosely coupled system (Weick 1976) (**components 15 and 16**).

Underlying Assumptions of the Segmental Model

- **Individual autonomy:** The subject teacher can work freely, scarcely bothered by other teachers or the principal. The school reflects a spirit of tolerance and personal creativity.

- **Efficiency:** There is an appropriate student/teacher ratio. The daily operations of the school occur within the guidelines allowed by the formal external regulations.

- **Curriculum-based learning:** Students must follow the prescribed curriculum.
- **Equality:** All teachers are equal, and each has the right to participate fully in all school-related decision-making matters.

Inherent Weaknesses of the Segmental Model

One result of the absence of collective policy making is that the school has minimal capacity for planned change and, consequently, for development. Changes relating to teaching are possible only within each individual teacher's classroom. Teachers make improvements within the framework of their own lessons so long as this does not inconvenience fellow teachers. Planned, comprehensive changes that affect a number of teachers cannot happen without the agreement of those teachers. In other words, systems development becomes possible only if the school principal, the school board, or a number of teachers deliberately start to work in a manner not consistent with the segmental organization. They may cross the boundaries and demand more collaboration. In doing so, they violate the cultural norms of the segmental organization and may encounter severe opposition.

The organizational relations as outlined here imply that use of external resources and facilitation can rarely be productive. To attempt systems-oriented consultation, the principal or one or more groups inside the school (for example, a project group) must exceed the limits of the existing norms of the model.

The segmental model, like all the other models, assumes as a condition for its adequate functioning that all teachers in the school are fully capable of performing their job. As in the other models, this condition is not always satisfied. However, typical to the segmental model is that unsatisfactory performance by teachers can be well concealed. Teachers are responsible for their own subject teaching and the relevant assessment of students; rarely are they observed teaching by one another or by the principal. It is always assumed that poor student performance is attributable to students' inabilities or to inappropriate selection or grouping of students. The model assumes that teachers are aware of their own shortcomings in certain areas and will correct them on their own. However, if teachers fail to do this, it is difficult for the principal, colleagues, and the superintendent to realize it, much less intervene.

Model II: The Line-and-Staff Model

The line-and-staff model is more structured than the segmental model because there now exists a strong hierarchy with control over school operations. The following organizational units characterize the line-and-staff model:

- The subject departments perform obligatory functions required by management, and respond to information requests from management. (They are reactive rather than proactive.) Teachers are expected to work with one another to meet management needs (**component 9**).
- In addition to their teaching duties, teachers are formally required to perform some tasks such as being a tutor, monitoring extracurricular activities, and participating in consultation matters within the subject department (**component 10.3**).

The fundamental difference between the line-and-staff model and the segmental model can be found in their coordinating mechanisms. In a Model II organization, there is now more emphasis on management (**component 13**) and hierarchical relationships (**component 9**). This enhanced need for a management hierarchy may result from an increase in the numbers of students and teachers. It may, however, reflect a more qualitative change – the school's increasing capacity to function in more complex and adaptable ways (**capacity for flexibility**).

This greater emphasis on management assumes the existence of a school culture accepting of management functions (**component 11**). In other words, teachers accept management functions as a means both for policy making and for coordinating school rules and standards. This acceptance makes it more likely that teachers exhibit readiness to fulfill middle-management functions such as those of department heads and team leaders (**component 14**).

Hierarchical supervision in a line-and-staff school is best exemplified by the assistant principal's role. The assistant principal (there may be more than one), while maintaining coordinating tasks within the educational sections, gains additional or special responsibilities such as coordination of guidance functions. Now, the assistant principal must structure, encourage, and coordinate counseling activities (**component 13.3**).

Assistant principals are expected to keep school management informed about what is happening in the school, carefully using their coordinating authority to monitor working methods, learning material, and diagnostic tests. An assistant principal's responsibilities may also include monitoring the quality of subject teaching by serving as chairperson at department meetings. However, they do not exercise actual control in the classroom; the subject teachers' autonomy is an accepted fact. They merely make recommendations and then try to structure the organization to ensure their implementation; for example, they may arrange for new teachers to receive appropriate introductions and support from a "selected" veteran teacher. The assistant principals are accountable to the principal for their activities; thus, a degree of hierarchy is established throughout the school's organization (the line). The principal, of course, continues to be responsible for the development of policy proposals, which then have to be approved by the superintendent and school board (**component 13.4**).

School policy (derived from the various policy decisions) is not only concerned with operations and facilities in the school (as in the segmental model) but also with general educational matters. In the preliminary stages of policy making, the principal seeks advice from other members of the school management (assistants) and from the various advisory bodies, especially the subject departments (**component 10.2**). The advisory functions are often called the staff function of a line organization. Still, the policy-making capacity of Model II cannot be called significant because the school principal's freedom to influence teachers' subject teaching continues to be minimal (**component 6.1**).

Most coordination within the Model II school is achieved by assigning specific teachers to specific sections to work in teams toward such goals as improving instructional strategies or enhancing guidance functions (**component 7.2**).

More than Model I, a Model II school focuses on individualization of education by providing students with mechanisms that support their transition to higher education or work. For example, students are given advice based on their actual skills and academic performance about what college majors might suit them (**component 4.1**).

The capacity for change in a Model II school is enhanced because, to a certain extent, school management develops educational policy in consultation with staff. A school with a line-and-staff organization is more accepting of external support and assistance for resolving school constraints. External agents have a greater chance of success if and when they enter a school with the approval and support of the school management (**component 5**).

Underlying Assumptions of the Line-and-Staff Model

- **Bureaucracy:** The values of bureaucratic organization are dominant, which means that authority is legal and formalized so as to provide clarity for all participants of the system.
- **Role definition:** The tasks and roles are clearly defined so as to provide stability and reduce human error and misunderstanding.
- **Cooperation:** A spirit of fairness or sense of justice prevails. (If a rule exists, it applies equally to all teachers or all students or both.)

Inherent Weaknesses of the Line-and-Staff Model

The delicate balance between regulations and professional autonomy in this model is easily distorted. A line organization, with its clear lines of command and consultation structures, could be viewed by teachers as threatening to their autonomy. However, most teachers do not challenge the directives of management because, in reality, these do not interfere with their own autonomy. Advice given to the principal by subject departments or guidance units often reflects teachers' desire to maintain the status quo. In some ways, teachers can actually obstruct the idea of a staff function. When asked for advice by management, they react formally but, in actuality, provide relatively insignificant suggestions. It is possible that an artificial policy-making structure functions in isolation from classroom reality, and all this may generate a lot of ineffectual energy or even increase resistance.

The larger the line-and-staff organization is, the more management will be isolated from teachers. It becomes more likely that management will adhere to its bureaucratic tendencies and try to resolve problems by refining the structure (even when the problems are caused by this same structure). Inherent to this model are remedial measures such as devising new rules and procedures; redefining tasks, duties and competencies; and tightening control.

Model III: The Collegial Model

Just as the line-and-staff model differs from the segmental model, the collegial model differs from both, and these differences are quite strong. Some characteristics of collegial models are as follows:

- All, or almost all, educational sections are horizontally structured. A unit is made up of the teachers of all parallel classes of a single year group and is usually headed by an assistant principal. Each teacher has a relatively autonomous position within the unit. The teachers' instructional approaches are not so narrowly defined as in Model I, nor are they so restricted as in Model II (**component 1**).

- The subject departments serve a policy function for making decisions about teaching functions such as the choice of curriculum, types of instructional methods, selection of teaching material, conditions for assessment norms, and the creation of teaching/learning techniques that enable students to work more in independent groups. The departments are also responsible for matching curriculum to the demands of possible horizontal transfers between classes or year groups (**component 2**).

The subject departments are relatively autonomous, and as long as the members of a department can reach agreement, they can expect the principal to agree with their policy decisions. The principal intervenes only if the decisions of departments are incompatible with one another or with the general policy of the school. In these cases, there must be further consultation between departments or directly with the principal. Teachers are obligated to follow the policy of their departments. There is autonomy at the department level rather than as in Model I, individual teacher autonomy (**component 6.1**).

There is a well-developed system of professional consultation within the departments. Teachers within a department often consult with one another about such matters as the implementation of new instructional methods for working with mixed-ability groups. An important feature of the departments' activities is an evaluation session to discuss both subject teaching and collaboration among teachers (**component 2**).

- At least one teacher of a section fulfills the role of tutor. This task may be quite demanding since the tutor not only has a "tutoring and pastoral role" with students but also must communicate with other teachers about students' progress and special problems of individual students (**component 6.2**). The tutor also communicates with those who fulfill other guidance roles for the students – career and vocational consultants, remedial teachers, counselors. Most of these contacts are not strongly formalized, but they may be frequent (**component 4**).

The school management's structure reflects the character of the collegial organization. The emphasis in a line-and-staff organization is on the principal's and assistant principal's individual responsibility; in the collegial organization, the responsibility rests collectively with all who have management roles. However, this does not relieve the principal of accountability to the school board, superintendent, or other external bodies, nor does it reduce the principal's authority to solve problems when collegial decision making stagnates. Principals rarely invoke this authority because they view their position as "the first among equals," and, therefore, are not inclined to exhibit hierarchical behavior. The assistant principals are responsible for managing their separate sections. An assistant principal may serve as the chairperson of a section and may also be responsible for encouraging educational innovations within the school (**component 13**).

The most important coordinating mechanism of the collegial model is the elaborate consultation structures throughout the school, particularly within the subject departments. A collegial model may reflect a variety of consultation structures (**component 10**), but these have some features in common:

- liaison devices for mutual adjustment – providing a flow of informal information and allowing for ad hoc decision making;
- decision making is based on the consensus principle ensuring that every teacher is in agreement and is willing to take the consequences of the decision; and
- meetings between chairpersons of departments and the principal are considered the highest policy making-body in this type of organization.

These combined features represent a typical organization in which decision-making procedures are carefully implemented. The "linking-pin" mechanism (a personal liaison between groups, both vertically and horizontally) combined with the consensus principle is the heart of the model. Every member in the organization is informed about important matters. Related to this, the culture within the school reflects a priority on professional values and modes of humanistic behavior (**component 11**). In the collegial model, staff are aware of external rules but adapt them to the policies of the subject departments (**component 7.1**). Internally-developed rules result from management's involvement in policy making according to the linking-pin mechanism (**component** 7.2). It is not difficult to imagine that a collegial organization has more capacity for change and development than either Model I or II. The activities of the departments in Model III are more strongly directed at solving problems and initiating change connected with their particular subject teaching. These activities encourage the production of carefully considered teaching and learning designs for the various subjects, which then result in internal differentiation within classes (**component 8**).

The developmental capacity of the school depends not only on internal resources but on the school's ability to identify and take advantage of external facilitation. The Model III school is open to making use of contributions from external facilitators when these contributions are compatible with the goals of the school.

Underlying Assumptions of the Collegial Model

- The functioning of the organization depends on understanding and cooperation among teachers.
- The functioning of departments depends on teachers sharing humanistic and learning values.
- School staff believe that consultation is meaningful for all participants.
- The principal performs a process role that depends on acceptance as the first among equals.

Inherent Weaknesses of the Collegial Model

The collegial model is a relatively sophisticated, subject-oriented organizational structure. Its inherent faults are found in its structured organizational behaviors. For example, reaching agreement may take a considerable amount of time, especially when needed decisions are not directly subject related. The collegial atmosphere fosters the idea that everyone has a say in decision making, even in nonprofessional matters. This may produce situations where nobody is willing to commit and where irrational processes may play a significant role.

The elaboration of subject teaching, instructional methods, and testing are paramount. Teachers are focused too narrowly on achievement rather than on students and tend to concentrate on subject teaching rather than on diagnosis of students' needs. Counseling and guidance functions, though important, focus on improving or supporting subject instruction. (The closer the school is to the ideal collegial model, the less attention is paid to other aspects of students' needs.)

A degree of convergent thinking in a Model III school is reinforced by the attitude of the management. Many principals feel more like a colleague to teachers than a manager. They do not want to create the impression among their colleagues that they are guiding matters or lessening the emphasis on subjects. Thus, the principal carefully examines innovations for their effects on subject teaching and rejects those that may cause conflicts.

Model IV: The Matrix Model

A central difference between the matrix model and the first three models is the enhanced guidance functions in Model IV. Recall that in the segmental model, guidance is very limited; in the line-and-staff model, individual teachers perform minimal guidance functions (tutoring, career and vocational counseling), and in the collegial model, teachers perform these same functions but in conjunction with, or with assistance from, guidance counselors or specialists. The matrix organization has reached a level of development that now supports the systematic integration of guidance and teaching (**component 4**).

There are *two* basic grouping patterns in a matrix school creating a complex organizational structure. The numerous departmental structures that are characteristic of Models I, II, and III have evolved into two primary divisions characterized as follows:

- **A teaching/learning division** designed to meet the various needs and interests of students while offering a more socially-balanced curriculum. A good deal of coordination among teachers is now required to transcend subject boundaries. Mixed groups of subject teachers form and meet to resolve problems about instructional approaches, to plan and implement curricula, and to develop assessment processes. Horizontal groups are the primary structures for teaching and learning, but many other groupings are possible, and each may exist for differing amounts of time.

- **A guidance division**, which includes personnel trained in various guidance roles and a few full-time specialists. The task of this division is to develop and implement a guidance policy not only derived from the teaching function (as in the three previous models) but also directed at the personal growth and social functioning of students.

An administrative support unit provides services for each of these divisions such as responding to information and documentation requests (library), budgeting, student registration, and producing teaching/learning materials (**component 3**).

The integration and cooperation between the teaching/learning division and the guidance division may result in an instructional approach that addresses, in various ways, the generic personal and social growth needs of the students. Sometimes, these needs are addressed only marginally through various short-term projects during the year; other times, the needs are addressed in a more significant manner, for example, every week; and still other times, they are addressed by a fully-integrated approach throughout the year. Information flow and mutual awareness exist at all levels between the divisions, a condition lacking in Models I-III (**component 10**).

Policy making serves an important function in a matrix organization because of the size of the school and the complexity of the organization (**components 12 and 13**). Many levels of management structures must exist across all professional staff roles (**component 1**); these structures include a distinct level of middle managers, as well as persons in other management roles (**component 14**). The management team reflects the school organization's degree of differentiation. Some assistant principals or middle managers are more closely aligned with subject teaching, others to guidance or societal issues. Allegiance to one division or another, instead of to both, may create tension that then requires increased integration between instruction and guidance.

Management does not separate itself from the teachers, a fact reflected in the number of existing procedures and structures supporting reaching consensus policy decisions (**component 13.1**). The success of these structures is ensured by limiting the number of strictly enforced external regulations while granting a high degree of internal autonomy (**component 7**).

Concrete structures that link groups and support reaching consensus are important in a matrix model. However, they are often overshadowed by a content-centered management style that includes taking risks, guiding initiatives, formulating educational philosophy, and stimulating intensive internal training (**component 13.2**).

The duality of authority structures (subject and guidance systems) in the matrix organization is not always readily apparent. The more agreement there is at the policy level, the less this duality matters. Most matrix schools maintain a balance by learning to adjust to the continuous tension between subject authority and guidance authority (**component 11**).

The matrix organization reflects an increasing capacity for the three organizational functions previously mentioned: the operation of flexible combinations of educational processes, the operation of complex educational processes, and the development of processes for organizational change (**organizational capacities**).

In many schools, any type of organizational change is specifically centered and implemented within an organizational unit. This is true in Models I-III, where innovations are confined within an educational section or department. However, since the matrix organization is not so restrictive, organizational change can affect more than separate units. Therefore, management in a matrix school actively informs and involves all the relevant staff and organizational levels in school development processes (**components 15 and 16**).

Underlying Assumptions of the Matrix Model

- The school organization reflects the complexity of society.
- Information flow and policy-making consultation must be well organized by management to cover the wide range of human values systems.
- A range of individual values allows for a range of goals and practices accepted by the members of the organization.
- The image of the school and the school development visions are in everyone's interest. Therefore, each member strives for a "personal best" within the given organizational context.

Inherent Weaknesses of the Matrix Model

Matrix organizations violate the classical principles of "authority along a chain of command." Authority is not centralized in a Model IV school, and therefore, it is difficult to identify a specific point of command. This may give the impression to teachers (and to the environment) that little is accomplished or ever changes – just chaos as usual. Groups external to the school, such as parents, the school board, and the general community, may feel that the school does not adequately communicate with them about significant school issues. A true matrix school, with nontraditional management styles and learning goals, may face rejection by the environment, resulting in parents removing their children to more traditional school settings.

The duality of the matrix organization contributes to the confusion about the school's management style and outcome focus. This duality often causes struggles about being curriculum focused or student focused. In a successful matrix school, a balance or give-and-take emerges. Unfortunately, this condition may be interpreted as noncommittal or without clear boundaries. So, besides the consequence of declining student enrollment, the duality and fluidity of a matrix organization may lead to a decline in teacher retention rates. Teachers may find themselves in a stressful environment, suffering from role conflicts (am I a teacher, a tutor, or both?) and too many demands on their time (meetings and discussions related to consensus building and mutual adjustment). Time demands become even more overwhelming for teachers when parents and students are invited to participate in policy-making sessions.

Model V: The Modular Model

The issues of duality experienced by the matrix model are resolved in a modular model by completely integrating teaching and guidance. Small teams (six to ten members) operate relatively autonomously and share ideas about the two strands of education – teaching and guidance. Each team serves a permanent number of students for several years, and all subjects are represented in each of these teams, often a number of them by one teacher (**component 1**). Ideally, every teacher is a member of only one team, a condition that preserves individual team culture.

Every teacher fulfills a guidance role as well as a teaching role so that teacher training extends beyond the traditional subject-oriented training. Teachers are encouraged to "forget" their previous training as subject experts and to become "generalists," learning new and better techniques for relating to their students. Intensive in-service training is almost certainly a requirement for successful functioning of modular teams (**component 8**).

The independent nature of the teams supports a flexible curriculum. Teachers develop curriculum based on what they believe students need to learn, not only to pass examinations but also to meet the social and personal demands from current trends in society. The organization of teams (the same students over some years) supports the realization of various learning goals – cognitive, personal, and social (**component 5**).

The modular organization can cope with only a limited number of rules (standards) as coordinating mechanisms. Each unit is small enough to reach coordination primarily through informal personal contacts although one team member is formally responsible for management matters (**component 10.2**). The relationships between the modular units are very informal, so the need for a large number of coordination procedures between units is minimal (component 7.2).

School management must create a common culture as the basis for the functioning of the modular units (**component 11**). This includes shared views on such things as education in general, the role of the teacher in the classroom, the importance of mutual feedback, and the ongoing professional development of teachers. This common culture must also include recognition of and adherence to general school policies. This does not preclude the fact that there is considerable room for each modular unit to develop its own set of policies based on interactions between teachers and student groups.

School management supports the group identity of each team, promotes mutual adjustment by procuring and disseminating information across groups, and facilitates contractual agreements between groups (**component 13.1**). The modular organization relies on the principle of "contract management" as a coordinating mechanism across groups. This means that modular units negotiate or contract with one another, as well as with management, to coordinate or complete tasks (**component 10.2**).

The school's relationship with parents is another important feature of a modular organization. Parents are regularly involved in and informed about the ideas and values of their child's modular unit. Parents also participate in the policy-making of the unit and give practical support if possible. Each modular team recognizes the importance of parents not only as potential sources of input on guidance issues (**component 6.2**) but also as members of the school's social environment.

The shared "generalistic" capacities of the teachers within a small modular team make integrated educational processes possible without too many coordinating mechanisms. The modular units create a high degree of flexibility because every unit can adjust its policy to the needs of its own student groups. Of course, boundaries are set by the availability of resources, but it is always possible to negotiate with other units to get what is needed. The capacity for change and development is limited only by the willingness and culture of the teams. In fact, each year, one modular team disbands and a new one is constructed, giving management an opportunity to inject fresh life into a team should this be required to maintain school policy (**component 9**).

Underlying Assumptions of the Modular Model

- Small is beautiful. School teams function better if they are small.
- Coordination and decision making are best done close to the work.
- Teaching and guidance roles are best integrated within one person.
- People in the organization function as a team of actors creating their own curriculum related to student goals and needs.
- The organization is an ever-changing entity owing to the creativity of the actors and the "games" of the participants who are striving for self-fulfillment.

Inherent Weaknesses of the Modular Model

Schools are seldom structured as modular organizations because the internal and external demands are so high. The environment or community is unfamiliar with this type of school; specifically, the variety and nontraditional nature of learning goals may dismay parents. Successful modular organizations try to overcome this obstacle by involving parents in their organization. This still may not totally eliminate problems with the environment, and coping with this can consume a considerable amount of energy.

Modular organizations function effectively when there is widespread agreement on the basic assumptions and values of the model. Each modular team is built on the presupposition that its members agree with one another, thus creating a homogeneous culture. However, conflicts may arise from the same conditions that are needed for effectiveness:

- the development of a "group identity" may generate a sense of superiority toward other groups, resulting in convergent behavior within one's own group;
- the development of conflicts between teams; and
- the temptation to challenge the school management, the external governing body, or parents just to prove the "rightness" of their own ideas.

These conflicts may hinder communication and may lead to the establishment of separate "schools within the school." In principle, the school management cannot interfere because it would threaten team autonomy. Therefore, a lot depends on the willingness and initiative of members of the school to meet together to solve their differences. Even if teachers are willing to cooperate, there is still the danger of permanent overload for each teacher and manager because too few structural limitations exist to prevent it.

5. FIVE ORGANIZATIONAL/EDUCATIONAL MODELS OF SCHOOLS

INTRODUCTION

In this chapter we integrate the five educational models with the five organizational models by matching them to form five congruent prototypical school models. Although most schools differ considerably from these prototypical models, the models offer a significant basis for comparison. We also show, through the kite configuration, how educational and organizational school development can occur.

In this chapter we elaborate on the connection between the educational and organizational models from two perspectives and answer the following questions:

- What kind of organizational model does an educational model need to function efficiently?

- Are there certain characteristics or tendencies of a specific organizational model that encourage the formation of the corresponding educational model?

Each organizational/educational model is named after the combined names of the educational and the organizational models discussed in Chapters 3 and 4. Since the names are fairly long, the models are often referred to simply by number. The names of the five models are:

Model I:	Selective streaming/segmental model
Model II:	Setting/line-and-staff model
Model III:	Mixed-ability/collegial model
Model IV:	Integrative/matrix model
Model V:	Innovative/modular model

Recall that the organizational configuration has a developmental capacity related to three organizational functions and that the educational configuration has a developmental capacity related to three educational dimensions (see Chapter 1). Figure 5.0 shows the interrelationship of these capacities.

Figure 5.0 Organizational and Educational Capacities

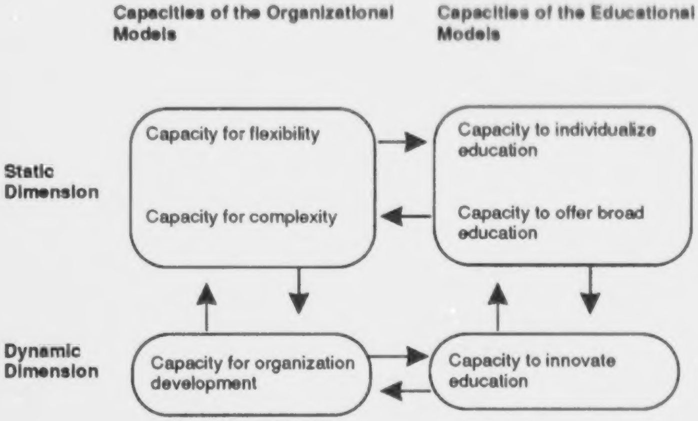

Capacities of the Organizational Models
Capacities of the Educational Models
Static Dimension
Capacity for flexibility
Capacity for complexity
Capacity to individualize education
Capacity to offer broad education
Dynamic Dimension
Capacity for organization development
Capacity to innovate education

Figure 5.0 shows the congruent relationship between the three capacities of the educational models and the three capacities of the organizational models. For example, a school with a high organizational capacity for flexibility also reflects a higher capacity to individualize educational processes. Conversely, inflexible organizational structures block individualization of educational processes. It will become clear that the educational and organizational components within a model exhibit the same congruency. The boxes on the top represent the more static functions, whereas the boxes on the bottom represent the dynamic change and innovative dimensions of the models. The descriptions of the schools will help clarify how these functions and dimensions interrelate. In the diagram, the arrows indicate the direction of causality. In the top boxes, organizational flexibility is a prerequisite for individualized education, whereas the school's educational model influences the development of the organization.

In the next sections, we describe, for each of the five combined models, the congruence between the organizational structures and the educational processes. We explain why and how the two subsystems of the combined models support, or "fit with," one another. For each of the five combined models, we first present some general characteristics of the two individual subsystems and then discuss representative school patterns and a blueprint of the prototypical model.

THE SELECTIVE STREAMING/SEGMENTAL MODEL

The essence of the segmental model is the highly autonomous position of the subject teacher. This position has many implications for the structure of the organization, its culture, and its functioning. It implies that there are strong inclinations for teachers to teach their subject matter in their own way to their own classes. The implications of such teacher independence include:

- minimal levels of teacher interaction and interrelatedness;
- instructional methods that are derived from traditional methods of curriculum organization and from previous formal and uniform teacher training; and
- teachers using their own individual instructional approach with no effect on other classes, other teachers, or other activities in the school.

This organizational structure and culture indicate an outcome-centered focus for the school. Collectively, the teachers feel that all students are responsible for their own learning and that this requires minimal support from the school. At the same time, teachers may feel responsible for student success within the prescribed time they teach them. These feelings arise because the teacher is held accountable by the principal who, in turn, is held accountable for the reputation of the school. For teachers, this usually implies no experimentation and no risks. In fact, this type of school rarely has mechanisms in place to support teachers who wish to change their instructional approach if the short-term benefits for students are not immediately apparent.

The selective streaming model is the type of educational model that fits best with a segmental organization because:

- there are a limited number of educational goals (cognitive subject matter oriented);
- there is differentiation in streams with minimal cross-transfer;
- cross-curricular education is minimal;
- classes and streams are homogeneous; and
- there are fixed criteria for selecting, admitting, and promoting students.

Patterns in the Selective Streaming/Segmental School

The need for cooperation among teachers within one-year (grade level) groups is minimal, so the need for coordinating mechanisms is also minimal. In terms of teaching, most teachers are self-sufficient and have their own curriculum outline related to the subject each teaches.

In this school, student progression or transfer to other streams is minimal; when it does happen, it is almost always downward to a lower stream. Selection and differentiation into streams achieves homogeneity of classes, a prerequisite for uniform educational processes that support the teachers' beliefs about generating "high output" from students. The condition of homogeneity may be subject to alteration if student success does not meet expectations or requirements. The parameters of the stream and the criteria for selection are changed to appropriately adjust the students and the student groups to the educational program of the school; these criteria are changed without too much deliberation or consultation.

Student guidance serves as another mechanism to ensure high educational output. Within this model, the cognitive subject goals define the guidance tasks. A function of guidance is to inform and advise students about the streams (tracks) and the subject options within each stream. Guidance services are usually separate from regular classes and may include tutoring services. Because the main function is to support the streaming processes, guidance tasks are relatively limited and can be accomplished without much cooperation from or among teachers.

The strengths of the selective streaming/segmental model include both the clarity of the expected outcomes for students and efficiency in terms of time and elbowroom for teachers.

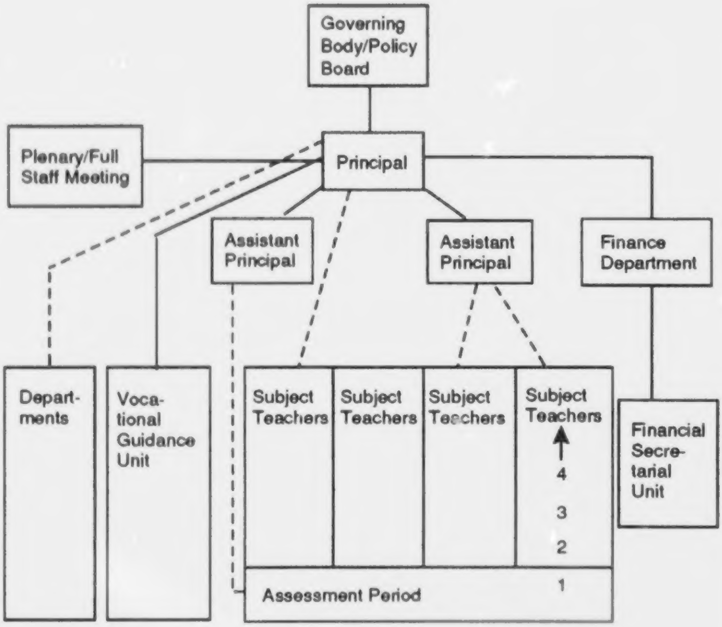
The two most significant weaknesses of the model are the selective mode of teaching and the limited capacity for change and innovation. The main reasons for these weaknesses are the lack of control over teachers by management and the lack of structural consultation between and among teachers. Sometimes, consultation between teachers ends up in differences of opinion that are difficult to resolve.

Another weakness of the model is that there is no peer evaluation. All teachers evaluate their own work. Therefore, most often, those teachers who function the least adequately are the least competent at evaluating themselves. Even in situations where teachers are performing below expectations or at unacceptable levels, the principal or colleagues rarely intervene to correct or discuss the educational activities of teachers.

NOTE: *There are many ways to visualize organizational structures. After each model description, we present blueprints to highlight the most important organizational units of each model (rectangles) and to characterize their organizational relations (the position of the rectangles and the connecting lines). The solid lines represent a tight relationship; the dotted lines indicate a weak or less* *significant relationship. We assume that all the educational models comprise at least a four-year curriculum; an arrow indicates the possibility of more than four years. Within blueprints of the models, the educational sections have a central position; the other units are grouped around this center.*

A Blueprint of the Selective Streaming/Segmental Model

Figure 5.1 A Blueprint of the Selective Streaming/Segmental Model


Governing Body/Policy Board
Plenary/Full Staff Meeting
Principal
Assistant Principal
Assistant Principal
Finance Department
Depart-ments
Voca-tional Guidance Unit
Subject Teachers
Subject Teachers
Subject Teachers
Subject Teachers
4
3
2
1
Financial Secre-tarial Unit
Assessment Period

In Figure 5.1, one can see an educational section with a one-year assessment period and four vertical sections of three or more years. The principal and the two assistants are each in charge of one or two sections. The principal is formally responsible for the assistant principals and for the finance unit and is in charge of the plenary meeting, which performs the main decision-making functions for the school. The principal's responsibility for education is limited to supervising teachers in a superficial or general way. The assistant principals have some coordinating work and handle student disciplinary affairs without having much formal authority over teachers. The departments are loosely coupled in every respect owing to the autonomous position of each teacher. Besides subject teaching and a little pastoral care, the teachers do not have many tasks. Guidance is limited to vocational advice, most of it taking place within the classroom.

THE SETTING/LINE-AND-STAFF MODEL

The setting model is an attempt to more appropriately adjust the curriculum to students' aptitudes rather than just placing them in predetermined homogeneous groups. This is considered a major improvement over the selective streaming model.

In most schools, "setting" (homogeneous grouping) applies only to the core subjects (mathematics, science, languages); the other subjects (art, physical education) are taught in heterogeneous classes. Within these core subjects, the setting model overcomes the inadequacies of the selective streaming model by establishing differentiation within each subject. In other words, these subjects are offered at two or three ability levels within each subject in a curricular track.

In the broadest sense, the same educational philosophy underlies the setting model as the selective streaming model. However, the setting model is most appropriately put into practice in a relatively large school. It is much more complex than selective streaming and requires much more coordination, mainly related to scheduling.

The most important difference between the segmental and the line-and-staff organization is the clearer profile of the school management as a coordinating body. This is exemplified best by the functions and tasks of the assistant principals. Previously, the assistant principals were responsible for an educational unit or a guidance unit. Here, the tasks of the assistant principals, which are related to the school's functional processes, are more complex. Assistant principals may now be responsible for scheduling, arranging for necessary substitute teachers, or coordinating the work of the departments by serving as chairpersons. The administrative and secretarial department supports the work that emerges from these coordinating activities.

Patterns in the Setting/Line-and-Staff School

The setting/line-and-staff model implies that students "have their own individual learning package," or individual assignments in terms of levels per subject and specific opportunities to change levels. Tests are scheduled at predetermined times, and these serve as the basis for decisions about student transfers to another level. The levels must be comparable in pace and curriculum content, the study hours needed should be proportional, and the modes of evaluation and testing must not be too diverse. These conditions require more structured coordination and management, which in turn, necessitate rules and procedures to operate such a complex structure. This complicated structure creates more immediate problems daily, which demand a more centralized or hierarchical management.

In the setting/line-and-staff model, educational planning and design also require a centralized and hierarchical management. Management has the responsibility of knowing what goals to set and how to develop the school. Normally, the teachers and the departments are minimally involved in this function, and the school has clear directives to prevent teachers or departments from interpreting the initiatives in their own way (as is usually done in the segmental model). The setting model attempts to overcome the primary weakness of the segmental model, the absence of a relationship between management and teachers, by designing additional structures.

The setting/line-and-staff model emerges within a school because the subject departments become concerned with:

- the continuity of the curriculum across the years;
- a consistent match between, or transfer of the curriculum content across, the sets (ability levels) within each single year group;
- providing transfer opportunities for students to move from one ability level to another within one subject area;
- designing tests; and
- providing an assessment report about student achievements to make comparison between the sets or ability levels possible.

These activities require a significant amount of consultation and coordination within the subject departments. These coordination tasks can be considerable, but they are less complex and intensive when the sets or ability levels are appropriate and functioning adequately for the students. Experience may lead to improvements in routine coordinating tasks, and changes in the nature of these tasks can occur if the number of ability levels or the subject content is modified.

The organizational design of the setting/line-and-staff structure functions as a hierarchical or overall framework for the subject departments, but the cooperation within each department is much more informal and collegial, and the department head is always the liaison with management. The hierarchical framework implies that departments work within the given structure and, if necessary, respond to requests from management concerning ways to improve school functions. In the initial stages of a line- and-staff model, departments may not be accustomed to systematic consultation and cooperation, so management provides support by creating a structure that gives the department heads monitoring responsibilities.

In the same manner, management can impose a structure on the design and development of student guidance programs. Within this structure, guidance roles may be performed by remedial teachers and career advisors who provide information about possible follow-up education or careers to students. Management gets an overview of the problems that arise by developing policy for how guidance activities should relate to the functioning of subject departments and coordinating all guidance services. The coordinating mechanism helps management gather information to make decisions about adjustments to the setting/line-and-staff model.

A Blueprint of the Setting/Line-and-Staff Model

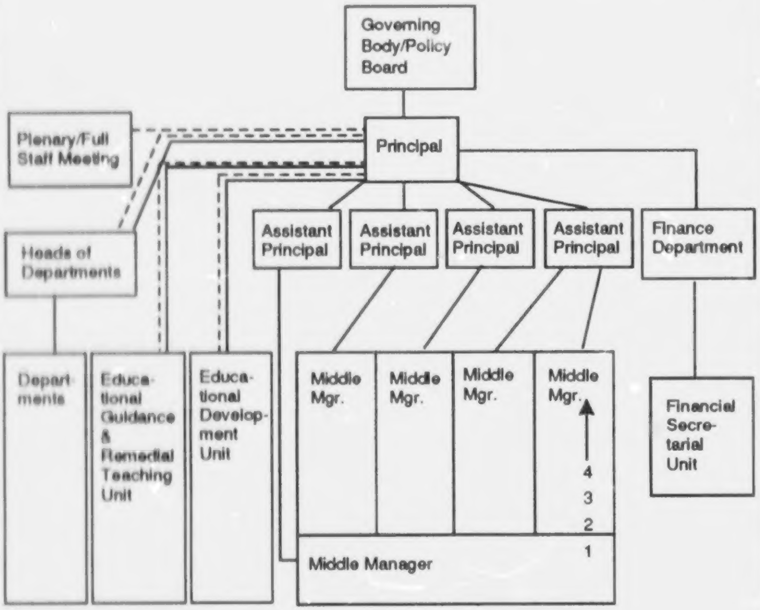


Figure 5.2 A Blueprint of the Setting/Line-and-Staff Model

Governing Body/Policy Board
Principal
Plenary/Full Staff Meeting
Heads of Departments
Assistant Principal
Assistant Principal
Assistant Principal
Assistant Principal
Finance Department
Departments
Educational Guidance & Remedial Teaching Unit
Educational Development Unit
Middle Mgr.
Middle Mgr.
Middle Mgr.
Middle Mgr.
4
3
2
1
Middle Manager
Financial Secretarial Unit

As Figure 5.2 shows, the stronger structure (related to the number of ability levels, scheduling, and the organizational structures needed for coordination) of this model is illustrated by the fact that some relationships that were indicated by dotted lines are now indicated by solid lines, and others are indicated by both dotted and solid lines, suggesting a specific increase of structure. The hierarchical structure starts in the governing body and runs down through the principal, assistant principal, and middle managers toward the teachers. The principal is responsible for legal affairs, finance, and educational policy. In this scheme, the principal is also responsible for guidance, vocational, and educational development (which could be delegated to one of the assistant principals, depending on task structure and personnel capacities). Each assistant principal is responsible for coordinating the activities within his or her section, with the help of middle managers (depending on the size of the school, the number of sections, and the amount of release or task-hours).

Unlike the segmental organization, all educational sections are horizontal and vertical. The full staff meeting has less decision-making power; the real power is concentrated in the relationship between principals and assistant principals. The subject departments are structured to meet objectives and coordinated by one of their members, usually the department head. The meeting of the department heads fulfills a "staff role" by advising the principal on educational matters and sharing information on departmental affairs.

THE MIXED-ABILITY/COLLEGIAL MODEL

In the mixed-ability model, no regrouping takes place outside the classroom; the division of students into specific ability groups takes place within the classroom. The teacher's task becomes more difficult than in the previous models – as teachers work with heterogeneous groups, the demands of coping with educational and group processes are greater.

Within the classroom, each teacher decides how long a subject unit will last, how long students will work in whole class groups, and when and how the group will be divided into smaller groups based on particular needs (for example, remediation). The mixed-ability model is more capable than the setting model of individualizing education because each teacher coordinates the individualization during lessons. Individualization is limited only by the policy of subject departments, not by school or management policy.

The basic design of the curriculum results from cooperation and consensus in the subject departments and consists of:

- the composition of the basic curriculum;
- the division into units;
- the revision/remedial and enrichment programs; and
- the design of the diagnostic tests.

To successfully support this basic design for educational provisions at the school-building level, organizational structures must promote:

- coherence between the programs of the parallel classes;
- developing the teacher's skills in instructional methods and evaluation by mutual consultation; and
- sharing professional knowledge about designing and implementing the curriculum.

The collegial organization supports these provisions with its strongly developed departmental structure; each department is capable of taking responsibility for designing, implementing, and evaluating a curriculum based on the principles of the mixed-ability model.

The coordination required between the different subjects is accomplished by the policy-making body of the collegial organization: the department heads with the responsible managers (assistant principal or principal). Typically, conclusions and decisions are made that are acceptable to the majority of those involved. Reaching consensus is very important.

Patterns in the Mixed-Ability/Collegial School

Developing and maintaining cooperation among teachers within their departments can be complicated, especially considering the deeply rooted autonomous tendencies of many teachers. Every teacher must personally find a balance between acting cooperatively and teaching in individual ways. The department heads play an important role in promoting and motivating cooperation. Additionally, shared responsibilities and common decision making are stressed by management and other key stakeholders to prevent individual needs and interests from dominating decision making (the "garbage-can" method of the segmental model).

The subject departments serve as staff development structures for the teachers. Specific staff development activities are confined within the separate departments since the interdepartmental relationships are relatively weak (due to the emphasis on each of the subjects). Teachers learn to improve their teaching skills by mutual consultation while learning to improve the quality of the consultation process itself. The results can take either of two forms:

- The organization as a whole may benefit from the call for greater consultation and shared decision making.
- The students may benefit from improved teaching and learning processes (for example, group work in the classroom). Students learn to support one another in ways similar to those demonstrated by teachers. The students may extend these new cooperative learning processes to their social arena.

Each department in a mixed-ability/collegial model can develop its own mechanisms for coping with mixed-ability classes. For the student, this may mean significant differences between subjects, and student reactions to these differences may make the teacher's classroom work more difficult. Formulation of a common school policy is often viewed as the only way to alleviate this condition, but this rarely provides resolution since each department interprets the new policy differently. Although the departments recognize the need for common educational views and practices, most departments are quite satisfied to continue to operate independently. Consequently, within this model, there is limited power to cross the barriers of subjects and departments.

Guidance functions are another connecting point between the collegial organization and the mixed-ability educational model. Guidance structures support guidance staff and tutors performing their roles largely in their own classes. Guidance services primarily focus on individual and group functioning skills because good working relationships among students are considered prerequisites for learning. Guidance staff informally communicate any problems to the appropriate teachers and, though this is viewed as quite supportive, teachers decide whether to respond to the information. The guidance system has no formal authority to intervene with the subject departments, a reflection of the weakness of the structure.

The models are congruent in their capacities to operate processes of organizational change and educational innovation. A high degree of cooperation within the subject departments implies a significant capacity for innovation within these departments. Departmental cooperation also motivates evaluation and innovative planning by teachers in their subjects. However, it is unlikely for the departmental steering committee to receive proposals from departments that cross subject boundaries. Of course, this precludes any major capacity for the adoption of a schoolwide educational innovation. The same is true for organizational change. Efforts to transcend the structures of the collegial departments are not likely to be very successful.

The capacity for innovation of the mixed-ability/collegial model is greater than the previous models in two respects:

- Departmental cooperation allows for a more sophisticated individualized subject curriculum.
- Some capacity for student guidance and development in social skills exists outside the field of cognitive learning.

But although the capacity to innovate is significant, subject departments still act as a barrier to be overcome.

In the mixed-ability/collegial organization, culture becomes significant because the power base is relatively evenly distributed between management and teachers. In fact, change and innovation may be limited by the school's culture if these are perceived to be antagonistic to the values of the subject departments. In this respect, the capacity for change may be larger in the line-and-staff organization because, if management wants change, it has more power to change the structure and impose compliance by the teachers. In the collegial organization, unless a substantial number of teachers are willing to relinquish subject predominance, change is unlikely to happen.

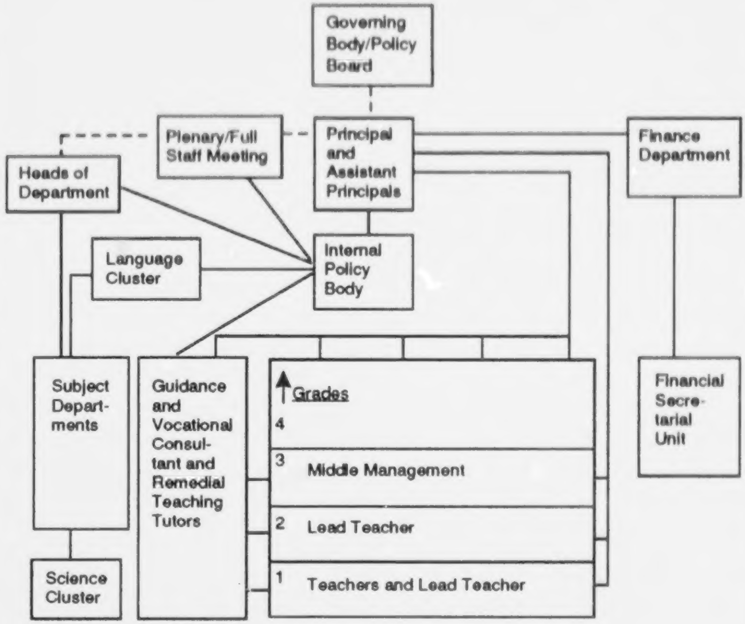
A Blueprint of the Mixed-Ability/Collegial Model

Figure 5.3 shows three horizontal educational sections. The sections for the fourth year and possibly later years have more or less vertical structures. This scheme stresses the importance of the policy body. Representatives from all organizational units attend the meeting of the school's policy body. Discussions on policy end in decision making after careful consultation in the school. However, the principal remains formally responsible and can, if necessary, restrict the power of the policy body.

The principal and the assistant principals cooperate as a "management team." The principal is in charge of formal and external affairs, communication with plenary staff meetings, and the governing body. The horizontal sections are coordinated by one assistant principal, assisted by middle managers (one for each grade) who coordinate daily routines, including guidance (pastoral care) and remedial teaching done by tutors. Most of the remedial teaching is integrated in subject teaching; the role of the specialist is limited to, and reserved for, particular problems.

The mixed-ability educational model requires tight departmental structures within and above the single department. The heads of departments have a strong say in the policy- making body and are well supported by their departments and by the clusters of departments.

Figure 5.3 **A Blueprint of the Mixed-Ability/Collegial Model**


Governing Body/Policy Board
Plenary/Full Staff Meeting
Principal and Assistant Principals
Finance Department
Heads of Department
Language Cluster
Internal Policy Body
Subject Depart-ments
Guidance and Vocational Consul-tant and Remedial Teaching Tutors
Grades
4
3 Middle Management
2 Lead Teacher
1 Teachers and Lead Teacher
Financial Secre-tarial Unit
Science Cluster

THE INTEGRATIVE/MATRIX MODEL

The integrative model has a broad educational base, devoting relatively equal attention to the development of cognitive, affective, normative, social, and expressive skills. The content structure of the curriculum is not strongly contained and is only partly determined by traditional subject boundaries. The end point of one year's courses defines the starting point for the next year's curriculum.

The curriculum is based on a significant number of criteria. The traditional subjects are still present, but other criteria such as multi-interdisciplinary factors gain in importance. Themes, real-life problems, social issues, and projects begin to emerge involving aspects of expressive, normative, affective, and social development of students.

Within broad limits, the curriculum and its structures are adjusted to the changing needs and interests of students. Student home groups may choose between a range of learning routes, and within home groups, individual students have some opportunities to set their own priorities. This means that there is the potential for the number of individual learning routes in a home group to exceed the number of general learning routes.

The complex features of this curriculum need a structural network of cooperation among teachers. This network differs considerably from the characteristic structures of the three previous models. The integrative model requires a consultative and cooperative framework that allows for different kinds of subject-matter boundaries (departments, interdepartmental groups, and teams) as well as for diverse guidance system structures (single-year groups or houses).

Patterns in the Integrative/Matrix School

Student needs and interests are paramount to the guidance systems. Guidance functions support teaching and learning processes by helping students improve their achievement levels and overcome any educational and personal obstacles. In this model, guidance has an enhanced function and value – it stresses the importance of self-fulfillment, personal growth, and individual responsibility for making choices. Guidance staff members (for all classes for single-year groups) meet regularly to discuss and determine implications of student assessment on curriculum development. The curriculum is assumed to be flexible enough to allow for changes, but negotiations with the subject departments are always necessary.

The organizational structures of the integrative/matrix model allow for cooperation at various levels and in various ways. These structures can facilitate change and usually consist of:

- regular consultation among teachers both within the same department and in different departments concerning subject matter, integrated subjects, and special themes;
- regular consultation of guidance staff concerning students, classroom climate, achievement levels, planning, needs assessment, or teacher/student relationships; and
- occasional consultation of teachers concerning short-term programs or projects that involve varying groups of students.

Teachers within this model perform two kinds of roles:

- teaching one or more subjects, themes, social issues, or projects both inside and outside their home group; and
- performing a variety of guidance roles for individual students, home groups, and temporary groups of students.

These roles can be fulfilled only within the complex and flexible organizational network of cooperation provided by the matrix organization. Two essential organizational features are:

- all or almost all teachers participate in two divisions within the school – the teaching division and the guidance division; and
- the divisions exert equal leverage over each teacher in both roles.

Teachers, in their various educational units in the school, must answer to two relatively independent authorities: education and guidance. An assistant principal is responsible for coordinating each division, which in turn, is responsible for developing its own practice and policy.

The steering committee or management team of the school must integrate the proposals of the two divisions into a consistent educational policy. The divisions are responsible for implementing relevant parts of policy decisions (each teacher gets information, guidelines, and resources from two sources), and both divisions are responsible for ensuring cooperation and coordination on all levels of the school.

The integration of education and guidance is a complicated process. Teachers and (middle) management have to be skillful so as to cope not only with their own teaching and guiding roles but also with the balance between the divisions. This presupposes an insight into, and skill regarding, the functioning of the school as an organization. In the matrix model, a balance exists between the top-down approach (dominant in the line-and-staff organization) and the bottom-up approach (dominant in the collegial organization). This equilibrium allows the school to reach decisions that are desirable from a policy-making point of view and able to be implemented by teachers and guidance staff.

The size of the school is critical. Schools that are too large can be at risk of having over-complex structures. When this occurs, staff are required to participate in numerous organizational units and may experience feelings of overload, disconnection, and alienation.

In the previous models, the subject departments serve the function of home group for teachers. These home groups adequately fulfill their social and emotional functions because they are responsible for important organizational tasks (for example, the departments in the collegial model). In a flexible organization, such as the integrative/matrix model, new functions emerge for the home group, including participation by teachers in the policy-making process, allocation of teachers to diverse tasks, professionalization of colleagues, supervision of beginning teachers, and training in guidance roles. No longer are subject departments the appropriate units to fulfill these new functions; rather, organizational units representing year groups take over the home group function. This is sensible because, on average, half the teaching is done by guidance staff and the other half by subject teachers.

The integrative educational model with its individualized and broad educational provisions is congruent with the matrix organization with its highly developed network of permanent and temporary groups of teachers. Two conditions for the efficient functioning of such a network are that management and teachers in the school possess the necessary social skills and attitudes and that management and teachers do not differ drastically in their views on the nature of integrative education. They must agree, to a relatively high degree, on policy statements that are clear enough to be used as guidelines and vague enough to give elbowroom for individual creativity. If a school does not succeed in developing such a common policy, the organization may easily slide into a bureaucracy.

The integrative/matrix model can take on multiple, widely divergent forms and can serve many integrative educational purposes. The approach that a particular school adopts depends on:

- the kind of culture or agreement that can be reached on educational/ organizational views; and
- external constraints and pressures.

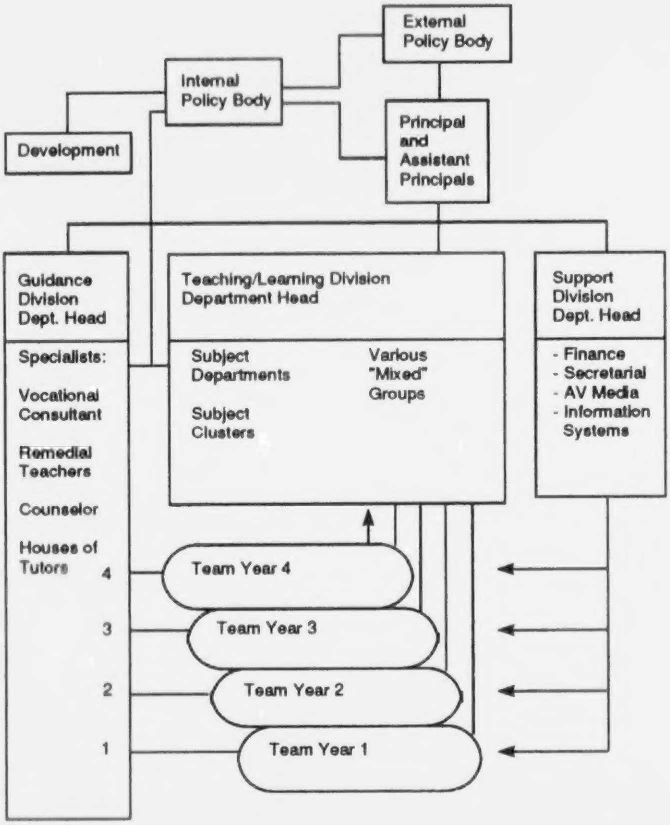
A Blueprint of the Integrative/Matrix Model

Figure 5.4 illustrates the matrix structure: the crossing of subject teaching and guidance, which primarily takes place in the "year-teams." A matrix organization has three divisions:

- a guidance division;
- a teaching/learning division; and
- a support division.

Responsibility for each division belongs to one member of the management team (principal and assistant principal).

Figure 5.4 A Blueprint of the Integrative/Matrix Model


External Policy Body
Internal Policy Body
Development
Principal and Assistant Principals
Guidance Division Dept. Head
Specialists:
Vocational Consultant
Remedial Teachers
Counselor
Houses of Tutors
Teaching/Learning Division Department Head
Subject Departments
Subject Clusters
Various "Mixed" Groups
Support Division Dept. Head
- Finance
- Secretarial
- AV Media
- Information Systems
4
3
2
1
Team Year 4
Team Year 3
Team Year 2
Team Year 1

In the European context, the policy board made up of the management team, school board, and representatives of the divisions is the main steering committee. Policy decisions made by this group become important frames of reference and serve as a coordinating device. Distinct units, divisions, groups, or individuals can decide whether or not to initiate or adopt new policy. Lengthy discussions at the school level always occur around adoption of new policy.

The principal serves as chairperson of the management team, managing external and support structures, and has the overall task of managing information and promoting school policy. The assistant principals execute policy and stimulate discussion and school development. The guidance division, comprising a variety of specialists (related to counseling, vocational advice, and remedial teaching), focuses its efforts primarily on problematic or critical situations. The teaching/learning division is quite complex, consisting of departments, subgroups, committees, and project groups who prepare new curricular activities and cluster or recluster subjects and student-oriented learning activities.

Year-teams consist of the tutors from all classes (student groups) and subject teachers who have the main responsibilities within each individual year. The core function of the year-team is to decide on the curriculum (the relationship between teaching/learning requirements and guidance matters). Year-teams can design curricular activities themselves or adopt the projects of the teaching/learning division. The year-team is also responsible for delivering the program of work within the boundaries of school policies. One team member – who may be a teacher, tutor, or middle manager – chairs each year-team, with an assistant principal supervising each.

THE INNOVATIVE/MODULAR MODEL

The educational goals of the innovative model differ only moderately from those of the integrative model; successful social skills are now more important, and small teams of teachers serve very important roles in individual student development. The integrative/matrix model required teachers to be highly skilled in both teaching and guiding roles. The innovative/modular model presupposes highly skilled teachers but in a different sense: Teachers have to be generalists skilled in a broad variety of roles and relationships.

The differences and similarities between the innovative/modular model and the integrative/matrix model are significant, but they may be confusing. To help avoid confusion, we present the description of the innovative/modular model differently. The congruence of the innovative/modular model is exemplified by (a) describing features of the modular organization, (b) matching these features with one or two features of the innovative model, and (c) comparing the features of the innovative/modular model to the features of the integrative/matrix model. (The letters (a), (b), and (c) refer to the letters following features 1-3.)

Feature 1: Small Team

a. Small teams of 5-8 teachers cover all aspects of education for 60-100 students of a single year-group over a number of years. Any specific teacher has professional knowledge of several subjects and the skills to teach these subjects, integrating them in themes or problem-oriented approaches. Teaching style is not just didactic – there are also affective and social activities. Even more important, the teacher combines teaching and guiding roles by tutoring individuals and groups of students.

   The weekly educational meeting is essential for cooperation between and among teachers. Here they discuss observations of students and student groups and gain perspective about the potential of each student or group of students. Together, they design an educational plan for each student or group.

b. Because teachers of one team know the students and the student groups of a single year-group and closely cooperate with one another, they can integrate teaching and tutoring roles. The team of teachers functions as a whole – teaching becomes a kind of tutoring, and tutoring is an aspect of the teacher/student relationship. Learning experiences of students and student groups are more individualized because:

   - all teachers are sensitive to the personal and social situation of every student and student group;

- teachers have general skills and so are able to develop relationships with students that stimulate achievement as well as personal and social growth; and
- the interaction of particular teachers with students is maintained for some years, which assures better relationships and better adjustment of students.

c. Differences from the integrative model are:

- Within the innovative model, students and student groups interact with a smaller number of teachers, and there is less changing of teachers.
- Within the innovative model, there is stronger integration and less differentiation or specialization in teaching and guiding.
- In the integrative model, every home group of students has one or two assigned guidance staff (the same over a number of years) who communicate with teachers about the development and problems of students. Within the innovative model, teachers *are* the guidance staff.

These three points reflect the fact that integration within the integrative/matrix model depends on many coordinating mechanisms: written rules, standards and procedures; coordinators' meetings; and working meetings. These occur considerably less often in the innovative/modular organization. The complexity of a coordinating mechanism in the integrative/matrix model means that communication is slower and less individualized. It is likely that teachers and guidance staff in this model have more professional tendencies than the generalists in the innovative/modular model. This has some advantages, but it may also make coordination and integration more difficult.

Feature 2: Autonomy

a. In the modular organization, the different teams (modules) are highly autonomous, deciding on their own policy within the broad criteria formulated by the school. The policy of the modules is developed by the teacher team based on its own experiences and capabilities and in consultation with students, parents, and other representatives of the community.

b. The scope of the module enables it to adjust to the needs of students and parents and to take into account the views and concerns of the social environment of the module. As indicated before, the various modules may choose quite different alternatives; they are entitled to adjust their policy to the specific needs of all participants. The participation of several stakeholders increases external support and involvement in the module's work, but its primary value is that it encourages student motivation in the learning processes.

c. The innovative/modular model conceives of a school as an open system with relatively loosely coupled subsystems. Every module directs itself toward students, parents, and the relevant social environment. This is its first priority, and the conditions set by the policy-making bodies (management) serve as the frame of reference. In contrast, the integrative/matrix model:

  - conceives of the school as a complex system to be continuously integrated;
  - stresses the policy of the school as a whole; and
  - has policy statements that are general enough so that teachers can adjust them to the needs and experiences of the students.

Feature 3: Culture

a. In the modular model, the teachers within one team share educational views. By having a common view, they can cooperate with one another without questioning fundamental topics. Team-building discussions help teachers share the same perspectives and basic understandings. Those teachers who do not agree with the teams' ideas and approaches try to join another team. This results in several homogeneous teams, but there will always be a few teachers with idiosyncratic views.

Whereas within a team there is homogeneity of viewpoint and explicit common values, between teams there may be differences of opinion. Such differences are limited because the school as a whole needs a "metaculture" encompassing shared values about such things as the significance of openness in communication — that is, a pupil and community orientation that accepts the right of everyone to express his or her interests and innovative attitudes.

b. Commonality of views and values within each team enhances the possibility that teachers' educational behavior is based on these values and views. When teacher behavior matches the metaculture, and values are made explicit, students are exposed to a deeper examination of culture, which is considered a strong stimulus for personal growth.

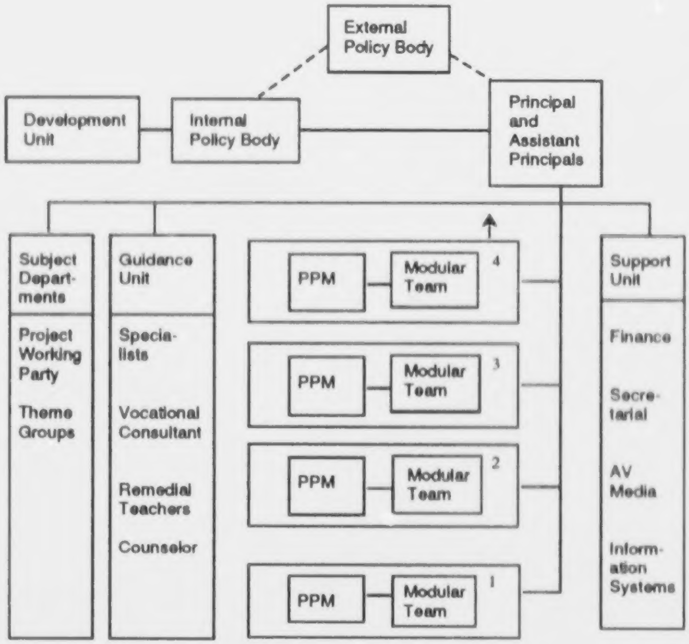
c. In the innovative/modular school, behavioral differences may exist between modules, but within each module, there is fundamental agreement about educational approaches. The philosophy of the school is assumed to be reflected in the behavior of teachers. In contrast, the integrative/matrix model:

- needs a formal foundation underlying the total school system; this foundation may be manifest in a school policy that is a compromise position between the different views and values of teachers and school management; and

- has a school culture that supports policies formulated by legitimate decision-making bodies and ensures loyal execution of these policies; thus, the behavior of teachers in the school is quite homogeneous even though underlying educational opinions may differ.

A Blueprint of the Innovative/Modular Model

Figure 5.5 A Blueprint of the Innovative/Modular Model


External Policy Body
Development Unit
Internal Policy Body
Principal and Assistant Principals
Subject Departments
Project Working Party
Theme Groups
Guidance Unit
Specialists
Vocational Consultant
Remedial Teachers
Counselor
PPM
Modular Team
4
3
2
1
Support Unit
Finance
Secretarial
AV Media
Information Systems

PPM= Policy Parent Meeting

As Figure 5.5 shows, the school consists of a number of relatively autonomous units, each of them with a team of teachers who perform integrated teaching and guidance roles. In this school, the three-year assessment period corresponds with the modular teams 1, 2, and 3.

Modular team 4 deals with the fourth-year vocational/technical stream. The modular team is responsible for designing and implementing the curriculum and for reshaping some parts or designing new activities within the wide range of school policy. Each modular team gets assistance through frequent consultative meetings with students and parents.

School policy results from consultation among the principal, assistant principals, modular representatives (middle managers), and guidance-unit and subject-department representatives. The management team stays well connected with the policy body since it provides their only forum for input on school policy.

6. APPLICATION AND USE OF THE MODELS

INTRODUCTION

Schools find the CaMaPe models useful in several ways – for diagnosing and reflecting on their own educational and organizational systems; as a framework to guide a restructuring process; or as a framework for evaluating a program, practice, or process. Most often, the models are used as a diagnostic/reflective tool.

USING CaMaPe FOR DIAGNOSIS AND REFLECTION

When used as a diagnostic/reflective tool, the CaMaPe models enable a school to characterize its organization and to define the means to develop it further. The CaMaPe components can identify both possibilities and constraints for development in a given school, pinpointing which steps toward improvement are favorable and which are likely to fail. This diagnostic procedure emphasizes reflection and requires school staff participation. In other words, participants are invited and encouraged to reflect on their own school situations within the broad framework of the CaMaPe model. A school might undertake the diagnostic process for a variety of reasons:

- to obtain a "snapshot" of the school in order to identify its status or position ("Where are we now?");
- to gain a perspective or sense of the school's history and its developmental processes ("What was the school like a few years ago?" "What direction are we moving in now?"); and
- to understand the relationship between educational processes and organizational structures ("What constraints within the school can be explained by an incongruence between the two subsystems?" "What views or practices are constraining development?").

Diagnosis, followed by analysis and interpretation, is aimed at the characterization of the school's patterns to establish a factual base for selecting developmental strategies; the component definitions and their interrelationships provide information critical to the construction of successful strategies. For example, it might be determined that a school pursuing several teacher-initiated developments with little or no coherence across them would benefit from redesigning the coordinating and communicating structures. Or it might be that a school with well-structured educational objectives and organizational procedures requires an enhanced in-service structure to make intentions a reality in the classroom. A description of the four steps in the diagnostic/reflective process follows:

STEP I: Introduce the process to *all* school members, and identify a representative sample as participants in data collection. (approximately 1-2 hours)

The essence of CaMaPe's diagnostic process is to interact directly with the people in the school to get a clear school image that is shared by all. Therefore, discussion to reach understanding and consensus is critical. Involvement in this type of well-structured discussion about educational processes and organizational structures can provide a starting point for change and development. It helps create a common language and frame of reference for all staff, which may, in turn, decrease some of the confusion and constraints inherent to any change process.

This type of school-based diagnosis is useful and appropriate only if the people in the school are both motivated to perform it and willing to accept the interpretations of their effort. The purpose for the diagnosis must be clearly stated, and all levels in the school must express commitment. Although not everyone in the school must be involved in the data collection process, everyone should have an opportunity to understand the CaMaPe models. A facilitator who is familiar with the models should present an overview to all staff so as to provide general information, clarify procedures, and answer questions. A representative sample should then be identified to participate in the actual data collection process.

STEP II: **Collect the data, and record it on the CaMaPe worksheets. (approximately 3-4 hours)**

Participants in the data collection process should understand that CaMaPe's models comprise both educational components and subcomponents and organizational components and subcomponents. Every component and subcomponent in each of these two subsystems has five specific definitions representing characteristics of five prototypical schools. Figure 6.0 shows an example of one educational component.

Figure 6.0 **Example of the Model-Specific Values for One Organizational and One Educational Component**

MODELS COMPONENTS	I	II	III	IV	V
B.1. Focus of the Curriculum	cognitive in all subjects offered	cognitive in a variety of subjects at different ability levels	same as II, plus pace and level of curriculum and instruction is driven by performance of the group	cognitive, affective, normative, and expressive, knowledge and skills aimed at the total development of the student	same as IV plus a focus on group processes and societal issues
2.1. Teacher's Sense of Connection	little or no sense of connection; cooperation is not required	teachers are required to participate in subject dept. affairs	teachers expect themselves and their colleagues to participate in their depts.	same as III	same as III

For the data collection procedure, the participants are split into role-representative small groups of approximately six to seven. Each group then reviews the components and their five model-specific definitions and selects the one that best describes the situation in their school. Each group must review all the educational and organizational components and record their selections on the worksheets provided. Sometimes members will not be able to agree on one specific definition, indicating that they believe their school represents a situation somewhere in between two or more models. In this case, it is best to mark both on the worksheet (see Figure 6.1).

Figure 6.1 Marking the Worksheet: Selecting the Value or Values that Best Represent the School

COMPONENTS	I	II	III	IV	V
2.1 Teacher's Sense of Connection			X		
B.1 Focus of the Curriculum	X	X			

STEP III: **Plot the kites, compare results, and build one ultimate school kite. (approximately 3-4 hours)**

When each group has completed the process of selecting definitions for all the components, the scores are transferred from the worksheet to the appropriate kite configuration -- either the educational kite configuration or the organizational kite configuration. Transferring components to the kites is done only so as to display the interrelatedness of the components along the two continuums; it does not pretend to provide an exact or mathematical picture.

To plot the kite, five areas are marked off within the kite (indicated by the dotted lines in Figure 6.2). Based on the definition selected by the participants, the components are placed within the appropriate areas. When more than one component definition is selected, the representative model is selected. The school profile, obtained by plotting the component values, will occupy a specific position within the kite. This position may be close to one of the prototypical models, positioned between models, or even positioned across the entire kite. Figure 6.2 shows some examples.

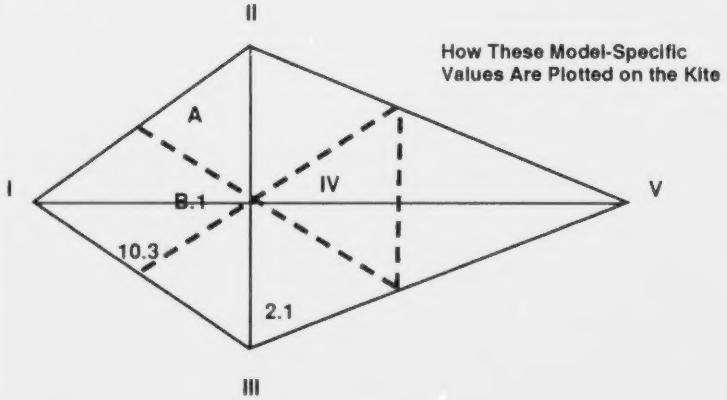
Within each small group, the two plots are overlaid onto each other to obtain one comprehensive kite for the school; the kites from each group are now compared across groups. Often, the kites differ considerably from each other, so a full group session of discussion and consensus building is held to obtain an ultimate school kite. This can be a very intensive session, and the following questions may help keep the task moving forward:

- Has an adequate or appropriate description of the school been obtained?
- Are the differences between kites or the incongruencies within a kite due to the diagnostic process itself? Or are the differences due to participants understanding the components differently?
- Is each component understandable and meaningful to the participants?
- Is a specific bias reflected, such as the wish to portray the school more favorably than is warranted?

Figure 6.2 Plotting Model-Specific Values on the Kite Configuration

Model-Specific Values Representing a School

MODELS COMPONENTS	I	II	III	IV	V
A	X	X			
B.1	X			X	
2.1			X		
10.3	X		X		



How These Model-Specific Values Are Plotted on the Kite

- Are the incongruencies significant? Are they related to the history of the school? Are they experienced as constraints to development?
- What feelings are evoked in participants in light of their educational and organizational positions?
- Which components, or relationships between components, show developmental opportunities? Is this a direction that the school chooses?

In this plenary session, variables may emerge that are not included in the component charts, or the group may select more than one kite if no consensus can be reached. These conditions must be considered when performing the analysis.

STEP IV: **Perform interpretation, analysis, and follow-up. (approximately 8 hours)**

Interpretation and further analysis of the ultimate kite (or kites) by the facilitator must be done thoughtfully and requires a good deal of time. The process involves the following steps:

- identifying clusters of component values related to a specific model and interpreting these based on the prototypical model;
- identifying exceptions to these clusters, especially extreme ones, and interpreting these inconsistencies based on the prototypical models and underlying theories;
- determining whether these exceptions represent true incongruencies within the school's organizational and educational structures; and
- presenting these tentative interpretations to the representative sample from the data collection step, explaining the relationships, soliciting feedback, and incorporating feedback into a written report for all staff.

We recommend a follow-up session with all school staff to review and confirm the results discussed in the written report. Prior to this meeting, the facilitator should provide a written report that includes the analysis and interpretation of the kite(s). This report can serve as the basic informational document for all members of the school, especially for those not directly involved in the data collection. It may also prove useful as the basis for new or revised school policy or as the starting point for formulating strategies to reach newly defined goals and objectives.

AN EXAMPLE: AN AMERICAN SECONDARY SCHOOL

This secondary school is in a medium-sized town in New England. The town is largely residential, with many service businesses and a few small industries. It is approximately 40 miles from a large metropolitan center, and many of the residents commute to work. There is one secondary school, which contains grades 9-12, with some 1,600 students, a principal, an assistant principal, 80 full-time teaching staff, and 24 part-time staff (including administrative support staff).

The school principal requested the diagnosis to help determine the feasibility of implementing site-based management and shared decision-making processes in the school. The principal was concerned about how this innovation would be received by the staff and hoped the diagnosis would provide a means for setting the context.

The principal, assistant principal, and a representative group of 26 staff members participated in the data collection process, which took roughly 3.5 hours. A 1.5-hour plenary session yielded the worksheets and ultimate kite displayed in Figures 6.3A, 6.3B, and 6.4, respectively.

It is clear that the educational model of this school is based on an underlying cognitive learning concept or theory. The major emphasis appears to be on both the streaming model (Model I) and the setting model (Model II). Only a few components (focus of the curriculum, choice of content, and responsibility for student guidance) reflect the mixed-ability model (Model III). This situation points out some noteworthy differences between European comprehensive schools and American secondary schools:

Figure 6.3A Organization

Organization Worksheet

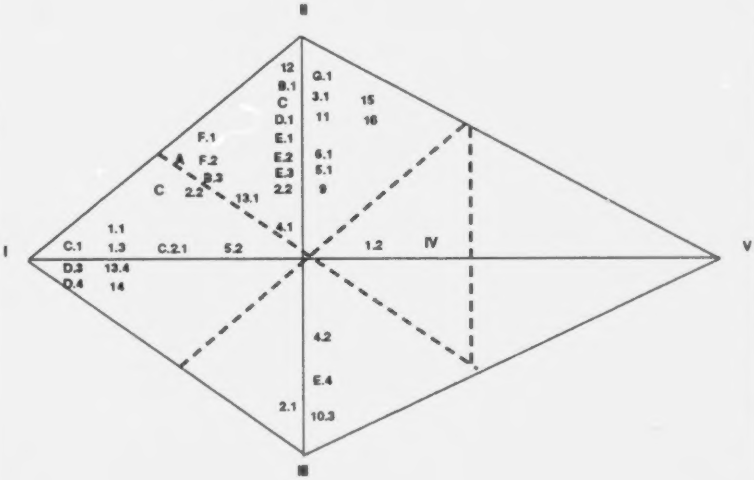
COMPONENTS	Model I	II	III	IV	V
1.1 Nature	X				
1.2 Size		X	X	X	
1.3 Autonomy	X				
2.1 Engagement			X		
2.2 Status		X			
2.3 Impact		X			
3.1 Core function					
3.2 Scope	NOT	APPLI	CABLE		
4.1 Core		X	X		
4.2 Executive body			X		
5.1 Core		X			
5.2 Who's	X	X	X		
6.1 Autonomy		X			
6.2 View		X			
7.1 External	X				
7.2 Internal		X			
8 Skills	X	X	X		
9 Supervision		X			
10.1 Quantity		X			
10.2 Decision making		X			
10.3 Main group			X		
11 Culture		X			
12 Task view		X			
13.1 Core	X	X			
13.2 Position head	X	X			
13.3 Deputy	X	X			
13.4 Responsible	X				
14 Middle	X				
15 Range		X			
16 Awareness		X			

Figure 6.3B Education

Education Worksheet

COMPONENTS	Model I	II	III	IV	V
A. Main structure	X	X			
B.1 Contents		X			
B.2 Relations		X			
B.3 Time allocation	X	X			
B.4 Offer		X			
B.5 Derived		X	X		
C.1 Dominant	X				
C.2.1 Didactic	X	X	X		
C.2.2 Interest	X	X			
C.3.1 Number		X			
C.3.2 Fixed		X			
C.3.3 What ways	NOT	APPLI	CABLE		
C.3.4 Norms		X	X		
D.1 Grouping		X			
D.2 Home group		X			
D.3 Regrouping	X				
D.4 Allocated	X				
E.1 Function		X			
E.2 Time		X			
E.3 Relation		X			
E.4 Functionaries			X		
F.1 Aimed at		X			
F.2 Function	X	X			
F.3 Looks like	X				
F.4 Who makes	X				
F.5 Standardization	X				
G.1 Aimed at		X			
G.2 Who criteria		X			

Figure 6.4 **The Main Components Plotted: The Example of the American Secondary School (Values from Figures 6.3A and B)**



The setting model, as described in the European comprehensive school context, is based on the philosophical belief in the importance of postponing student choice of, or commitment to, a specific curriculum or career track while also ensuring that school structures support social equality and diverse personal and developmental needs and abilities. These beliefs serve as the rationale for establishing stable student home groups for general subjects (to meet social needs) and differentiated ability groups for core subjects (to meet needs of diversity). Both these same grouping patterns are maintained over several years.

It appears as though similar organizational patterns or structures are used in American schools but without the same underlying philosophy or belief system. These structures simply serve as a mechanism for assigning students to their "appropriate" classes and teachers, thus reflecting an emphasis on school structure

> *over student needs. In other words, distribution of students into the correct tracks merely functions as a school-centered/teacher-centered scheduling process. In this sense, the educational process closely resembles the streaming model in which homogeneous groups of students are working to their presumed ability levels in subjects such as social studies, languages, and physical education. When students fail, they merely repeat the class or move to a lower track.*
>
> *However, tracks in American schools are not simply single streams, as are those found in Model I; they more closely resemble the sets of the setting model (Model II) because within any curricular track (college prep, business, vocational) there are some limited subject options, and the core subjects are offered at different ability levels (most often A, B, C). The home groups in American schools mainly serve an administrative function, and usually all groups change yearly.*
>
> *These combined conditions may indicate that American secondary schools do not exclusively reflect a setting model or a streaming model but a combination of both.*

In this American secondary school, students are viewed as products (**component A**); the general focus and structure of the curriculum (**component B**) reflects both the streaming and setting models, indicating that most of the content is fixed and differentiated per subject. Organization of learning (**component C**) is primarily fixed with preset options; grouping patterns (**component D**) indicate a school-centered scheduling approach; student guidance (**component E**) functions are primarily concerned with informing students about subject choices and options; and testing and reporting (**component F**) and evaluation (**component G**) clearly show the selective, cognitive nature of the school.

The organizational model of this school has many features of the line-and-staff model; the main exception is in the structuring of student guidance, which reflects more of the cooperation and collegiality found in Model III. The primary organizing principle or structure is characterized as vertical, which is in accordance with the tracking system (**component 1.1**). The variety of values placed on professional skills (**component 8**) reflects a relatively strong and traditional position of autonomy for individual teachers (**component 6**). Management (**components 13 and 14**) supports the position of the teachers; the hierarchy operates from a more remote position (Model I) with control emerging more from rules and formalized procedures than directly from teacher commitment (Model II) (**component 9**). The subject departments hold a very strong position, providing a sense of identity for teachers and supporting the main consultation groups (**components 2 and 10.3**). The focus of professional development for teachers and departments is subject oriented (**component 5**). Guidance staff have a collegial connection similar to that found within the departments, which also serves to limit management's control (**component 4**). The general complexity of the organization and the level of organizational awareness (**components 15 and 16**), as well as the school culture (**component 11**), reflect the formality of a line-and-staff model.

In this school, there is a high level of congruence between the educational and organizational structures. The tracking system is set and stable, and there are few indicators for change. The tracking system does not require a more elaborate organizational structure; currently, it functions effectively as a coordinating mechanism. Guidance responsibilities, often practiced outside their designated structures, may reflect the wish of individual staff to extend their roles to helping students. These feelings may explain why the teachers' sense of connection with the department and the departments as communication structures (**components 2.1 and 10.1**) reflect the collegial model (Model III).

Further analysis reveals that there is severe segmentation between the subject departments, the vocational/technical department, and the guidance unit. Coordination within each department is rigid and hierarchical with the department head reporting only to the assistant principal who, in turn, reports to the principal. No coordinating or communicating mechanisms exist across departments, not even among the department heads. Each department operates autonomously, with regulations outside the department serving only a superficial purpose for management. Guidance services are blocked somewhat by these subject department structures and have minimal influence on subject teaching.

The principal's original concerns – how to successfully implement site-based management and shared decision making – are legitimized by the analysis of the kite. Little impetus or support for change can be expected because roles and responsibilities within the school are clearly defined and the structures supporting these are functioning adequately. Currently, within the system, the principal does not have enough time free from daily routines to formulate and develop an implementation plan. There are no mechanisms for delegating administrative responsibility to the department heads; they are free to conduct business independently of the principal and one another.

A recommendation that emerges from the interpretation of the kite is for the principal to conduct frequent meetings for all department heads in order to delegate responsibility and foster collaboration and cooperation. This would relieve the principal of some work routines while providing time to support development of the guidance units. It appears as though this is the only group ready for change; they want to do more than just inform students of subject choices and options. The principal should take advantage of this motivation for change and become more of an educational leader within the school (rather than the administrative executive he is now). Because of the rigid structures in the school, no change can occur independently or from the bottom up; the principal must himself initiate the change process.

This school illustrates how existing organizational structures are connected to the implementation of both new organizational programs (site-based management and shared decision making) and new educational processes (promoting guidance functions).

OTHER USES FOR THE CaMaPe MODELS

In addition to their use as a diagnostic/reflective tool, the CaMaPe models can provide a framework for schools as they undertake a restructuring process or as they evaluate an improvement effort.

CaMaPe as a Framework for Restructuring

Using CaMaPe as a framework for restructuring processes undertaken by school staff, the school community, school boards, and external facilitators is an abstract use of the models and their underlying concepts. In this case, the models serve as the conceptual framework or school "vision," with the components serving as points of comparison (guides) for change. By delineating the fit between the educational processes and the organizational structures, users are able to see and point out constraints and incongruencies in their own school setting.

CaMaPe as a Framework for Evaluation

Determining the relationships between the subsystems (educational and organizational) and several components of the CaMaPe models can serve evaluative purposes. In the three examples that follow, we illustrate how and by whom the models can be used:

- **Reflective evaluation**: School staff pause to ask themselves why their current endeavor to implement cooperative learning (or any other innovation) is failing. Using the components as a baseline, systematic reflection and revision helps identify points of incongruencies between organizational and educational systems. Once incongruities are identified, staff can rectify them and then continue with implementation. This reflective evaluation can prevent either forging ahead despite the lack of progress or quitting and moving to a new initiative.

- **Assessment**: School staff assess a training session given by external consultants to determine why the sessions were overshadowed by tensions related to hierarchical or professional concerns. The CaMaPe components can help pinpoint the discrepancies between management styles, school culture, and the concepts presented in the training session.

- **Program evaluation**: External facilitators review a program they presented at a workshop attended by staff from several schools to determine why it was rated as ineffective. Using the CaMaPe components as data collection tools, they discover that they had not appropriately addressed participants' very diverse backgrounds and school characteristics, including their educational settings, concepts, and beliefs.

DEVELOPMENT AND CaMaPe

The diagnostic foci of the CaMaPe model are the points of congruence between educational processes and organizational structures. However, establishing perfect congruency is not necessarily the goal of development because this creates a very stable situation – one that is often difficult to develop or change. For example, the setting/line-and-staff model can be so well structured that staff are unable to consider developmental processes beyond the limits of the school's rules and procedures. Or a mixed-ability/collegial school may generate staff that become obsessed with the need for consultation and consensus.

The concept of development within the kite configuration implies more of a balance between top-down strategies and bottom-up processes. For example, hierarchically mandated development has only a limited term of effectiveness. It may be an appropriate method to get the school moving, but after a certain point, too much emphasis on hierarchical structures blocks the professional growth of teachers. The same can be true for teacher-initiated change in areas such as subject-related didactics. Eventually, organizational chaos occurs if teachers don't allow for the structural coordination necessary to implement schoolwide change. While undergoing planned change, the balance must be considered. In the early stages of hierarchically controlled development, the involvement of teachers and conditions for their personal and professional growth must exist. Teacher-initiated development, often conceived and developed within the protective confines of a subject department, must ensure awareness of and support from all staff and management, or the effort will be viewed as provocative or threatening.

Educational reform movements and large-scale policy changes often ignore the critical connections between professional processes and hierarchical structures. Bureaucrats are inclined to view development as only adding or subtracting structures (for example, for the control or allocation of funds) without considering the daily functioning of educational and organizational processes within diverse schools. Many of these national reform movements fail because of the distance between the levels of the policymakers and the school where the work must be performed. And many restructuring efforts, usually initiated at the district level (Budde 1988), fail because they become "a redesign from the desk" – the distance to the schools, and especially to the teachers, is too great. At the building level, change facilitators often promote an educational innovation isolated from, or without consideration of, existing organizational structures, which may, in fact, be antithetical to the innovation. Such reforms have often failed because the hierarchy (district, school board, community) was not appropriately informed or involved.

Many current restructuring efforts recommend a vision-oriented change process for any type of school. However, from the perspective of CaMaPe's kite configuration, there is a critical distance between a Model I school and a Model IV school that influences how effective such a process can be. A considerable amount of differentiation, such as among organizational skills, is required before restructuring efforts (related to Model IV) can be successful. The majority of secondary schools are most closely aligned with the selective streaming/segmental model (Model I), which means that differentiation is minimal. Therefore, these Model I schools must first move through the stages of differentiation (through either Model II or Model III), which requires much time and energy.

In terms of educational development, a Model I school moving toward a Model II school (setting model) mainly focuses on revising their learning materials and tests to match the differing ability levels of students. A Model I school moving toward a Model III school focuses on improving teaching styles and instructional strategies to best serve mixed-ability groups of students. Both developmental lines include the addition of new educational elements or processes that enhance differentiation within the model. For example, the development of material may eventually lead to another didactic approach, which then may require new material. As this process continues and more elements are added, the models become even more differentiated.

When moving from a Model II or Model III school to a Model IV school, the characteristics (learning styles, needs and interest, and personal aspects) of students become an especially relevant part of educational programs and processes, and so there is a need for a higher degree of differentiation and integration.

The last stage of educational development or movement to a Model V school is characterized by attempts to establish an open curriculum. This stage cannot be reached without having obtained the prerequisite skills in the previous models.

The assumption of the CaMaPe development configuration is that organizational growth parallels educational growth. This would mean either cooperative work on material development within management-initiated departmental groups (Model II) or teacher-initiated cooperation within subject departments focused on improving teaching styles and instructional approaches (Model III) or the formation of additional working groups to acquire skills necessary to cope with diverse student needs (Model IV).

Development, as a process of educational and organizational change, implies modifications to a number of components within each subsystem — for example, the evolution of a new perspective on student guidance, additional time and energy from staff and management to devote to development, or more coordination to ensure the awareness of all relevant players. Each of these steps is gradual and moves the school closer to another model.

School development is seldom as clear-cut as the description implies. Usually, there is much tension, many fallbacks, and frequent regrouping for reflection. One reason for this is the unequal development of the two subsystems. In most professional growth situations, there can be low-level awareness of organizational structures. Hierarchically mandated development is often lacking in educational vision. In addition, often the distance between visionary reform and teacher concerns results in less than smooth transitions.

There is even the risk that reform will eventually end up in an organizational structure already serving the existing educational model. Changing only the organizational subsystem may serve the needs of a few staff, but without direct connections to classroom practices, it will likely stagnate in endless exercises and discussions.

Research on educational change (Fullan 1983) reports that small meaningful steps in educational practice, matched to the values and concerns of the teacher, are more likely to lead to organizational implementation of change. For example, if the goal of an educational program is the development of subject clusters and themes, the departmental structures must be opened to cooperation and collaboration. Teachers must learn to work with others outside their own subject department to select learning materials, design lessons and activities, and discuss instructional approaches. New organizational structures would have to be put into place to support these types of collaboration. All this might feel like a much bigger change than just implementing a new educational program. An effective development approach that illustrates the need for organizational structures to be precursors of educational development is the Copernican Plan (Carroll 1989):

> *The Copernican Plan will create an instrumental environment that supports mastery learning. But mastery learning need not be part of the program at the beginning. It will be much easier for teachers and students to develop and adapt to a mastery/credit system if it is developed under a structure that accommodates its implementation.*

A step-by-step approach to school development severely limits the pace of change. Generally, it takes a particular school at least two or three years to move into the differentiation stages of development of Model II or III. This process *must* precede any restructuring activities (movement to Model IV) if they are to be successful. Often, a school that has just completed the stages of differentiation has little energy left to immediately begin any intensive restructuring program.

When discussing school development, it is also important to consider that a school is embedded in its environment and that the environment must also change and develop with the school. Culture becomes significant, both internally and externally. Moving into a more differentiated model is not only difficult within the school, but moving away from a cognition-dominated program also has considerable implications for parents, students, the school board, and the community. Therefore, all relevant players in the change process must be informed and involved as soon as possible, or the school will become isolated in its development, and the innovation at risk of failure of implementation.

Most school development occurs and remains confined within Models II and III schools. Restructuring a school into an integrative/matrix model (Model IV) or an innovative/modular model (Model V) is a relatively grand design that can be fostered in only a stimulating and supportive environment. The establishment of a "new" school, new demands from business, a more "student-as-client" climate, mergers of schools, or the acquisition of many new teachers might allow a school to bypass the piecemeal pace of the more traditional school. Currently, CaMaPe provides schools with a way of understanding themselves that can help them make the changes they choose.

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APPENDIX A

Chart of the Five Educational Models,

COMPONENTS	I Selective Streaming	II Setting
A **View of Students**		
A.1 The school's view of the student, what the school believes the student is and should be	Student is product; student is recipient of cognitive curriculum knowledge through direct instructional methods Student is viewed as an independent learner who progresses with little or no help from the school	Student is product; student is recipient of curriculum knowledge at different levels through direct instruction; graduates at different levels and majors
B. **General Focus and Structure of the Curriculum**		
B.1 Focus of the curriculum	The focus is cognitive in all subjects offered	The focus is cognitive in a variety of subjects at different ability levels

Their Components, and Specific Definitions

III Mixed Ability	IV Integrative	V Innovative
Student is product; student is recipient of curriculum knowledge through direct instruction and other activities mostly in small groups	Student is a client and informed consumer Client is person with needs that can be stated -- before or during relationships	Students are co-workers in the organization; student is an active participant, contributor, knowledge producer, generative learner, and a member of a community of learners
Same as II, plus the pace and level of curriculum and instruction is driven by the performance of the group	The focus is cognitive, affective, normative, and expressive knowledge and skills aimed at the total development of the student	Same as IV plus a focus on group processes and societal issues

Chart of the Five Educational Models,

COMPONENTS	I Selective Streaming	II Setting
B.2 Connections between subjects and between units within subjects	There are strong boundaries between subjects and units; fragmented	Same as I, but with some links between units
B.3 Time allocated for subjects	According to prescribed norms and uniform time allotments; mostly externally regulated	Same as I
B.4 How curriculum offerings are determined	What is offered depends on the expertise of the current staff	Guidelines from the department or district; there is a set core curriculum of cognitive subjects and some choice of noncognitive subjects

Their Components, and Specific Definitions

III Mixed Ability	IV Integrative	V Innovative
Same as II, but with many links between units; longitudinal buildup within each subject	Cognate subjects are clustered for some interdisciplinary learning; strong longitudinal buildup; projects; themes	Little or no boundaries between subjects; cumulative, theme-driven, interdisciplinary learning
Same as II	More time spent on subjects other than cognitive	Flexible time allotment with much time given to address group process skills and other real-life issues
Not exact following of guidelines from the district; departmental discussions determine how and which to follow; set core curriculum of cognitive subjects and some choices of noncognitive subjects	A core curriculum of clusters of cognate subjects is set at the school level; teachers choose what will be specifically offered from within each cluster, partly inferred from student needs and wishes	Same as IV, but teachers and students together choose what will be specifically offered from within each cluster

Chart of the Five Educational Models,

COMPONENTS	I Selective Streaming	II Setting
B.5 What end purpose drives the choice of specific content taught within curriculum offerings	Final examination and certificate requirements	Final examination and certificate requirements; text books or syllabi required by the department or district
C. **Organization of Learning**		
C.1 Dominant structures in which learning takes place	Teaching subject to the entire class	Teaching main subjects in ability level groups; if school is large enough, the levels become "the class," and it is the same as I

Their Components, and Specific Definitions

III Mixed Ability	IV Integrative	V Innovative
Same as II, but teachers can exercise some degree of professional choice in selecting parts of text books to cover	Same as III, plus guidelines from an explicit view on individual development (e.g., Montessori)	Same as IV, plus guidelines from societal views rather than developmental views
Teaching of a subject to an entire class; movement to small groups within a class; basic information is presented to all -- then split for group work	Teaching is directed to an entire class called a home group; group work occurs (and groups change) within home groups; home groups exist to maintain connections between teacher and students (content focused) * Home group because of more guidance function and not fixed, basic information presented to entire class	Teaching is directed to class called home group; groups within home group are small and fixed to build structures (relationship focused)

Chart of the Five Educational Models,

COMPONENTS	I Selective Streaming	II Setting
C.2 Teacher's repertoire of instructional approaches		
C.2.1 Number of instructional approaches used in the school	Few	Few
C.2.2 Differentiation of instructional approach according to student interest and learning style	Little	Little
C.3 Learning routes (the way students move through the curriculum; the number of learning routes becomes the student's curriculum)		

Their Components, and Specific Definitions

III Mixed Ability	IV Integrative	V Innovative
Some	Many	Many
Some	Much	Much

Chart of the Five Educational Models,

COMPONENTS	I Selective Streaming	II Setting
C.3.1 Number of possible learning routes	Each track is one learning route	Several learning routes; each cognitive subject has several levels to which students are allocated (on the basis of periodic tests); these levels constitute different learning routes
C.3.2 The extent to which the schedules and paths of the learning routes are planned and fixed in advance	Fixed and rigorously planned; each track is one learning route	Fixed in each of the different, well-defined levels

Their Components, and Specific Definitions

III Mixed Ability	IV Integrative	V Innovative
Several learning routes; enrichment and remediation procedures provide additional learning routes for each basic unit	In principle, many learning routes are adapted to students and to the needs, wishes, and styles of the individual; routes are not fully determined by students	Same as IV
Less fixed in advance; if necessary, remediators can take more time or use alternative procedures for learning	Not fixed; greater part is not planned; rarely spontaneous, however, since teachers do plan possibilities for alternative learning routes	Not fixed; less planned; the interests and learning styles of the students influence learning routes

Chart of the Five Educational Models,

COMPONENTS	I Selective Streaming	II Setting
C.3.3 How students transfer from one learning route to another	There is only one learning route: all subjects must be mastered sufficiently; if student does not meet this standard, he or she fails	All students are tested in all subjects at the same time and may be assigned to a certain level based on the exam scores in each subject; limited possibility for changing levels -- compatibility of content, evaluation are prerequisites for transfer

Their Components, and Specific Definitions

III Mixed Ability	IV Integrative	V Innovative
All students in the group must master the goals of each unit within a subject; at the end of each unit, based on test results, students will engage in either remediation or enrichment activities until the whole group is ready to move on; each subject individually follows this procedure	Many simultaneous learning routes; the decision to move on to the next is based on individual readiness to take on new content; there can be movement across learning routes	Students learn as individuals and continuously progress; teacher teams and students are influential in determining the many learning routes; small groups are fixed so learning routes are correlated to groups; this fact limits the number of routes; whole groups finish learning routes before moving on; no transfer across routes

Chart of the Five Educational Models,

COMPONENTS	I Selective Streaming	II Setting
C.3.4 Extent to which requirements in the learning routes are fixed (reasons for establishing learning routes)	Requirements are fixed for the learning route in each track	Requirements are fixed in each learning route in each track per subject and by level; there are more requirements than in level I at the school/teacher level and a greater variety of tests; prognostic test determines allocation to a certain level for each cognitive subject
D. **Grouping Patterns**		
D.1 Dominant grouping pattern	Students are taught in whole classes; the entire track is considered a homogeneous group	Students are taught in whole classes; cognitive subjects are homogeneously grouped by level; noncognitive subjects are heterogeneously grouped

Their Components, and Specific Definitions

III Mixed Ability	IV Integrative	V Innovative
The requirements are fixed for basic units for all subjects; the enrichment units are not fixed; remediation brings students to fixed basic requirements	Requirements fixed in only the most general sense (i.e., a project report must meet some defined standards); requirements are not uniform -- how you get there and what you produce can vary but must meet some general teacher standards; learning styles are important in determining requirements for students	Same as I, but product must meet standards determined by both teacher and student
Students are taught in classes of heterogeneous groups; within a class, there may be homogeneous grouping for remediation or enrichment for short periods	There is a basic heterogeneous group with many possibilities for individual work	Basic heterogeneous group; within that group several smaller (4-6) heterogeneous groups work cooperatively, and students spend only limited amounts of time in individual learning

Chart of the Five Educational Models,

COMPONENTS	I Selective Streaming	II Setting
D.2 Extent to which students belong to a fixed home group for learning and guidance	Each track constitutes a fixed homogeneous group of students; within the track, same-year students are grouped in classes for instruction where they remain for one year	The overall group is heterogeneous and fixed; each day, students attend some classes that are homogeneously grouped (cognitive) and some classes that are heterogeneously grouped (noncognitive)
D.3 Amount and rationale or basis for regrouping (systematically) in home group	The emphasis is on selection, so there is little movement for educational reasons within the track; if the student cannot master all the subjects within the track, she or he fails; there is limited regrouping, and the rationale for regrouping is selection; no movement occurs across classes, and there is no regrouping of the whole class	There is little regrouping of students; if there is regrouping, it is within classes and is based on test results for those subjects taught in levels; there is regrouping only within the fixed home group

Their Components, and Specific Definitions

III Mixed Ability	IV Integrative	V Innovative
The overall group is heterogeneous and fixed; within group, there is both heterogeneous and homogeneous grouping depending on the progression of the individuals through the units of a subject	The overall group is heterogeneous; there is cross-year grouping and permanent classrooms	There is a fixed basic heterogeneous home group for social purposes; within classes there is a lot of flexibility to design and establish groups for doing a variety of tasks; home groups are stable for 2-3 years
Within each class, much regrouping occurs, and it is related to the enrichment/ remediation system; there is no movement across classes	Fixed home group; no regrouping of home groups; within home group there is a lot of regrouping related to project work and tasks	Fixed home group; fixed work group; little regrouping except when the groups cannot successfully co-exist

Chart of the Five Educational Models,

COMPONENTS	I Selective Streaming	II Setting
D.4 The basis on which students are assigned to teachers	Random; advanced-year students may be assigned teachers with higher qualifications	Not random for the homogeneous group; for the heterogeneous group, the assignment of students is largely random; students remain in this group for years; teachers are assigned to the homogeneous groups -- best teachers to the highest level; students are assigned based on test results
E. **Student Guidance**		
E.1 Function of the system of student guidance within the school (what it is)	Correcting and guiding; guidance serves a minimal role; the function resides primarily with each teacher, but it is very limited	Correcting and placement; the teacher plays a small guidance role focused on remediation or learning skills; a trained counselor supports students on these issues in exceptional classes; some assistance is given to students regarding subject choices or level assignments; primary function belongs with teacher, and there is minimal support

Their Components, and Specific Definitions

III Mixed Ability	IV Integrative	V Innovative
Students are assigned to teachers on a more or less random basis and remain with those teachers for several years	Students are randomly assigned to a fixed group that works with the same team of teachers for several years	Randomly assigned to home groups; individually assigned to work group (general level matching); a stable situation for teachers and students over several years
Same as II, plus more emphasis to stimulate the possibility of group work; the teacher's guidance role focuses on students' group skills for classroom functioning and student individual skills for independent work; a counselor serves students in exceptional cases	Same as III, plus focus on development of the student; the teacher's guidance role focuses on students' ability for group functioning plus individual skills related to the developmental process	Same as IV, plus a focus on the development of society as a whole; more attention paid to the development of the group, including team work, cooperative learning; teachers are trained to perform counseling role

Chart of the Five Educational Models,

COMPONENTS	I Selective Streaming	II Setting
E.2 Amount of time that teachers devote to student guidance	Little	Little to moderate
E.3 Relationship between student guidance and teaching and learning	No integration; there is a strong separation between teaching and guidance; guidance is an administrative function for discipline only; teacher either teaches or performs guidance function	Same as I, but the focus of guidance is changing from discipline to teaching -- student placement into levels and subject selection
E.4 Responsibility for student guidance (who is assigned guidance tasks)	The lead teacher or assistant principal for a grade or year-group is in charge of discipline and guidance	Lead teachers and counselors with narrowly defined roles (that are independent of teachers' roles) and remedial-level subject teachers

Their Components, and Specific Definitions

III Mixed Ability	IV Integrative	V Innovative
Moderate; mostly in response to the importance of group functioning	Much	Much
Same as II, but guidance focus moves closer to teaching and learning with focus on group functioning; guidance functions include individual counseling and serving as liaison between student and teacher	Guidance and teaching are integrated to a greater degree; guidance now affects curriculum to ensure that it meets students' needs; guidance staff perform activities with students and may do project work with students with input from the teachers	Guidance and teaching are integrated; teachers serve as both teachers and guidance staff; teaching functions closely resemble guidance functions
Lead teacher, counselor, and subject eachers; lead teachers have more sophisticated role; subject teachers deal with group work; counselors begin to work with teachers to monitor student progress or to solve problems	Counselors with many responsibilities play a valued role, as well as subject teachers; cooperation exists between teachers and counselors	All teachers are trained to provide guidance

Chart of the Five Educational Models,

COMPONENTS	I Selective Streaming	II Setting
F. **Testing and Reporting**		
F.1 What is being tested	Achievement on a cognitive level is tested -- strictly cognitive skills	Cognitive skills at ability levels
F.2 The use of test results	Student selection and promotion -- pass/fail decisions	Allocation of students to ability levels in subjects
F.3 The form and contents of the report	A listing of subjects with grades for each	A listing of subjects with grades for each; no visible distinction on report indicating ability levels
F.4 Responsibility for report preparation	Individual classroom teachers submit grades, and report is prepared by the school office	Same as I

Their Components, and Specific Definitions

III Mixed Ability	IV Integrative	V Innovative
Cognitive skills and group social skills	Cognitive, group, and developmental skills	Cognitive, developmental, social, and interpersonal skills
Decisions about whether a student does enrichment or remediation work at the end of each unit within each subject	Decisions about what contents should be taught next given the developmental needs of the child	Same as IV, plus feedback to the teacher team about its own performance
Same as I, plus descriptions about group functioning or enrichment work	Combination of a narrative report and subject/grade listing; description of themes and projects	Same as I, plus students write their own reports
Same as II, but may include report by the counselor, or if there is a lead teacher, he or she may add information	The counselor prepares the reports with input from the subject teachers and some input from students	The teacher team prepares the reports with input from the students

Chart of the Five Educational Models,

COMPONENTS	I Selective Streaming	II Setting
F.5 Reference point for comparisons in the tests and implications for students	Fixed norms; if a student does not meet these, he or she has to do a whole year over again or go forward but in a lower track	Fixed norms by subject; if a student does not meet these, he or she goes to a lower level in that subject or subjects -- some implications for promotion
G. Evaluation of Teaching and Instructional Processes		
G.1 Use of evaluation of the process of education (does evaluation ever occur)	Rarely occurs, but if it does, it might result in changes in student selection criteria or procedures	Ad hoc and reactive; might result in changes in norms for subject levels, thereby affecting student assignment
G.2 Who designs and who does the evaluation	The individual teacher using ad hoc, diffuse, or no criteria for evaluation	Subject teachers, either individually or within the same department; ad hoc criteria

Their Components, and Specific Definitions

III **Mixed Ability**	IV **Integrative**	V **Innovative**
Norms are marginally fixed and more relative in that there is a comparison of the student to the progress of the particular group; group requirements and norms may be altered based on group success or failure; students who fail may or may not have to remediate	More types of norms (in addition to cognitive) are used, and student is compared with himself or herself; the student participates in assessing his or her own progress on a particular unit, project, or theme within a subject	Same as IV, plus an assessment of overall functioning of the group of students as part of the group
Built-in to design of enrichment/ remediation process; might result in adjustment of basic units and enrichment/ remediation material within a subject	Built in and relatively formal; might result in changes in the educational program and teaching strategies and approaches	Same as IV, but less formal; might result in adjustment of team(s)
Same as II; criteria relates to balance between basic and enrichment material	Counselor, subject teacher, and students develop criteria and conduct evaluations	The teacher team working with team of students develops and conducts evaluations

APPENDIX B

Chart of the Five Organizational Models,

COMPONENTS	I Segmental	II Line and Staff
I ORGANIZATIONAL STRUCTURES		
1 Teaching and Learning Structures (houses, clusters, tracks, grade-level teams, multi-aged groupings, etc.)		
1.1 Primary organizing principle	Vertical -- the dominant teaching and learning structure is a track (vocational, college prep) which is organized vertically and includes the students in all the years of the track	Same as I; vertical by whole curriculum; vertical by ability level
1.2 Size of teaching and learning structures	Moderate	Big
1.3 Autonomy of teaching and learning structures	Great; much autonomy	Limited by hierarchy

Their Components, and Specific Definitions

III Collegial	IV Matrix	V Modular
Horizontal -- by whole curriculum in mixed-ability groups	Same as III; may be more choice or clusters of related subjects	Horizontal; modular; small team of teachers (5-8) who work with same students for a number of years (may be parallel classes)
Big	Big	Small (5-8 teachers)
Limited by mutual agreement among teachers in departments	Limited by explicitly-formulated internal and external school policy	Great; much autonomy

Chart of the Five Organizational Models,

COMPONENTS	I Segmental	II Line and Staff
2 **Subject Departments (math department, science department, etc.)**		
2.1 Teacher's sense of connection and/or identification with his/her department	Little or no sense of connection; cooperation among teachers of same subject is not required; there is no formal department head/ role	Teachers are required to participate in subject department affairs
2.2 Impact of departments on school functioning	Little	Moderate
2.3 Decision-making functions of the departments	Minimal; subject teachers may meet about teaching assignments, common books for parallel classes, and teaching schedule; disjointed information exchange	Advises management regarding decisions about books, policy, exams, etc., when management requests it; executes management policy

Their Components, and Specific Definitions

III Collegial	IV Matrix	V Modular
Teachers expect themselves and their colleagues to participate in their departments and to accept the requirement to participate	Same as III	Same as III
Great	Moderate	Moderate
Makes subject policy; provides structure for mutual support among teachers of the same subject	Same as III, plus provides support for inter-subject	Advises modules and management

Chart of the Five Organizational Models,

COMPONENTS	I Segmental	II Line and Staff
3. **Office of Administration, Finance, and Other Support Services**		
3.1 Responsibilities	Budget control and administration	Same as I, plus student registration
3.2 Parts of the organization receiving services	Management	Same as I
4. **Student Guidance Department**		
4.1 Core function of guidance department	No structures -- only loosely coupled or nonexistent	Separated structures for guidance counselors and remedial teachers

Their Components, and Specific Definitions

III Collegial	IV Matrix	V Modular
Same as II, plus a focus on educational issues -- general support to teaching and learning, library services, and materials production	Same as III, but even better equipped and supported to perform tasks	Same as IV
Same as II, plus an emphasis on departments	Same as III, plus emphasis on policymaking bodies (e.g., principal and assistant principals and representatives from decision-making and grade-level teams)	Modules; management
Separate structures for counseling functions and for teachers as guidance counselors; some integration	More structures in place to enhance integration of teaching and guidance; more collaboration structures	No structures since there is total integration of teaching and guidance services; the team is guidance

Chart of the Five Organizational Models,

COMPONENTS	I Segmental	II Line and Staff
4.2 Staff with guidance responsibilities	"Homeroom" teachers and vocational counselor	Same as I, plus remedial teachers
5. **Educational Development (curriculum committee, staff development committee, special interest groups)**		
5.1 Focus of educational development	Nonexistent as organizational structure	To reduce educational or organizational constraints (i.e., special committee to define levels if they are not well enough defined)
5.2 Who initiates the educational development effort	Teachers can individually pursue their own development	Management
6. **Teachers**		
6.1 Amount of teacher autonomy	Teacher has full individual autonomy in the classroom	Teacher's autonomy is limited by hierarchy and administrative guidelines and policies

Their Components, and Specific Definitions

III Collegial	IV Matrix	V Modular
Home group teachers plus guidance staff	Same as III	All team members
Same as II, plus improvement in eaching approaches and development of eaching/learning designs for the various subjects	Integration of instruction and guidance	Same as IV, plus the use of real-life issues
Departments	Management, task forces, houses	Teacher modular teams; management; policy-making bodies (principal, school committee, etc.)
Teacher's autonomy is constrained by subject department guidelines and policies	Teacher's autonomy is limited by internally developed policies that are schoolwide	Teacher's autonomy is limited by modular teacher teams

Chart of the Five Organizational Models,

COMPONENTS	I Segmental	II Line and Staff
6.2 Teachers' view of the activity of and need for student guidance	Neutral to negative; teachers are not concerned with guidance functions	Viewed as someone else's responsibility; "none of my business"; teachers remit to guidance staff
II **COORDINATING MECHANISMS FOR THE SCHOOL**		
7. **Regulations and Guidelines**		
7.1 School response to externally-imposed regulations	Many specific external rules that are acknowledged but not often observed	External regulations are transformed by management to meet perceived needs
7.2 Response to internally-developed regulations	Focus is on regulations that will direct student behavior and protect teacher autonomy	Same as I, plus sets of regulations that impose restrictions on teacher behaviors related to such things as efficient functioning of classrooms, meetings, and the school in general

Their Components, and Specific Definitions

III Collegial	IV Matrix	V Modular
Responsible for providing information about students to guidance staff	Same as III, plus actively responding to guidance staff if necessary	Responsible for, and actively perform guidance functions; the teacher is the guidance counselor
External regulations are interpreted by management and departments to serve their own purposes	External rules are strongly generalized because of well-developed and accepted school policies	Same as IV, but due to shared culture
Internal rules for ensuring efficient functioning of the departments and the decision-making process	Many internal rules to maintain coordination of matrix; organization depends highly on internal rules	On school level -- moderate number of internal rules that are more general in order to develop a shared vision and culture; teams also formulate their own rules

Chart of the Five Organizational Models,

COMPONENTS	I Segmental	II Line and Staff
8. **Professional Skills as a Means for Standardization of the Work Process**	Fixed externally in subject-matter training and preservice education	Same as I, plus related to the acquisition of skills necessary for performing student diagnosis and placement into tracks
9. **Hierarchical Supervision**	Minimal due to teacher autonomy	Moderate; required to maintain setting structure
10. **Schoolwide Communication and Consultation Structures**		
10.1 Number of different structures for consultation and communication	Few	Moderate
10.2 Nature of decision making	"Garbage-can" method of decision making; each person can raise any issue for discussion	According to the pyramid or hierarchical method

Their Components, and Specific Definitions

III Collegial	IV Matrix	V Modular
Same as I, plus related to the acquisition of skills necessary to use a variety of learning methods	Same as I, plus internally-developed skills are replacing skills learned externally	Same as IV
Minimal; directed at organizing --"making things run smoothly"; process-oriented supervision rather than hierarchy	Moderate; directed at supporting school policy	Minimal; directed toward developing a shared vision or culture
Many	Many	Many
"Reaching for consensus" decision making (consent is all that is required); linking-pin principle is used to obtain consensus	Same as III, plus middle management negotiates for consensus	Mutual adjustment; small group dynamics play an important role

Chart of the Five Organizational Models,

COMPONENTS	I Segmental	II Line and Staff
10.3 Main communication group	Full staff meeting	Management-initiated and subject department meetings
11. **Culture: Shared Norms, Views, and Values (across all communication groups)**	Minimal/explicit norms; there is a strong implicit culture: "Each person to his own"	Some with little to moderate influence on actions in the classroom; culture stems from hierarchy
III GOVERNING BODY AND MANAGEMENT		
12. **What Governing Body Perceives Its Role to Be**	Control of operations	Same as I, plus establishing policy guidelines
13. **Management**		
13.1 Responsibilities of the principal	Administer budgets and control operations	Same as I, plus designing structures and rules for such things as tracking, schedules, and meetings

Their Components, and Specific Definitions

III Collegial	IV Matrix	V Modular
Subject departments	Teachers, guidance staff, and year-teams	Modular teacher teams
Culture is based on shared professional views and work	Internally developed culture built from interdependence	Strong internally-developed culture at the school level
Same as I, plus participating in policy-making	Same as III	Same as IV, plus some emphasis on shared vision of a successful school
Same as I, plus process-oriented facilitating (linking-pin function) within departments, between departments and management, etc.	Same as III, plus facilitating integration of teaching and guidance	Same as I, plus facilitating the shared vision

Chart of the Five Organizational Models,

COMPONENTS	I Segmental	II Line and Staff
13.2 Power base of principal	Personal	Formal; hierarchical
13.3 Responsibilities of assistant principals	Assistant to principal	Responsible for educational tracking system; schedule
13.4 Who reports to the governing body	Principal or head	Same as I
14. **Existence of Middle-Management Position**	No positions exist	Assistants to the assistant principals
IV. **COMPLEXITY OF THE ORGANIZATION**		
15. **Degree of Complexity**	Few structures; little variation	Many structures; little variation within structures

Their Components, and Specific Definitions

III Collegial	IV Matrix	V Modular
First among equals	Instructional leader	Team leader of the management team
In charge of an educational section and guidance	Same as III, plus in charge of educational development units	Member of a team of assistant principals with a variety of responsibilities (e.g., parent liaison)
Same as I plus management team	Same as III	Same as III
Separate levels between management and teachers	Same as III	Middle-management positions are integrated into modules as team leaders
Several structures, more variation within structures (less within groups; more outside groups related to the linking-pin principle)	Several structures; much more variation within structures; highest degree of complexity	Few structures; greater variation within teams; high degree of complexity within teams

Chart of the Five Organizational Models,

COMPONENTS	I Segmental	II Line and Staff
16. **Staff Awareness of or Identification with the School as an Organization**	Little; low level	Moderate

Their Components, and Specific Definitions

III Collegial	IV Matrix	V Modular
Substantial	High	High

APPENDIX C

Worksheet
Educational Components (1)

COMPONENTS	Model I	Model II	Model III	Model IV	Model V
A. VIEW OF STUDENTS					
A.1 The school's view of the student					
B. GENERAL FOCUS AND STRUCTURE OF THE CURRICULUM					
B.1 Focus of the curriculum					
B.2 Connections between and within subjects					
B.3 Time allocated for subjects					
B.4 How curriculum offerings are determined					
B.5 Purpose driving choice of specific content					
C. ORGANIZATION OF LEARNING					
C.1 Dominant learning structures					
C.2 Teacher's repertoire of instructional approaches					
C.2.1 Number of instructional approaches					
C.2.2 Differentiation of instructional approach					
C.3 Learning routes					
C.3.1 Number of possible learning routes					
C.3.2 Extent to which learning routes are planned and fixed in advance					
C.3.3 How students transfer from one learning route to another					
C.3.4 Extent to which requirements in the learning routes are fixed					
D. GROUPING PATTERNS					
D.1 Dominant grouping pattern					
D.2 Extent to which students belong to fixed home groups					
D.3 Amount and rational for regrouping					
D.4 Basis on which students are assigned to teachers					

Worksheet
Educational Components Cont'd. (2)

COMPONENTS	Model I	Model II	Model III	Model IV	Model V
E. STUDENT GUIDANCE					
E.1 Function of student guidance system					
E.2 Amount of time teachers devote to guidance					
E.3 Relationship between student guidance and teaching and learning					
E.4 Responsibility for student guidance					
F. TESTING AND REPORTING					
F.1 What is being tested					
F.2 Use of test results					
F.3 Form and contents of the report					
F.4 Responsibility for report preparation					
F.5 Reference point for comparisons					
G. EVALUATION OF TEACHING AND INSTRUCTIONAL PROCESSES					
G.1 Use of Evaluation					
G.2 Who designs and who does the evaluation					

Worksheet
Organizational Components (1)

COMPONENTS	Model I	Model II	Model III	Model IV	Model V
I ORGANIZATIONAL STRUCTURES					
1 Teaching and Learning Structures					
1.1 Primary organizing principle					
1.2 Size of teaching and learning structures					
1.3 Autonomy of teaching and learning structures					
2 Subject Departments					
2.1 Teachers' sense of connection and/or identification with department					
2.2 Impact of department on school functioning					
2.3 Decision-making functions of the departments					
3 Office of Administration, Finance, and Other Support Services					
3.1 Responsibilities					
3.2 Parts of the organization receiving services					
4 Student Guidance Department					
4.1 Core function of guidance department					
4.2 Staff with guidance responsibilities					
5 Educational Development					
5.1 Focus of educational development					
5.2 Who initiates the educational development effort?					
6 Teachers					
6.1 Amount of teacher autonomy					
6.2 Teacher's view of and need for student guidance					

Worksheet
Organizational Components Cont'd. (2)

COMPONENTS	Model I	Model II	Model III	Model IV	Model V
II COORDINATING MECHANISMS					
7. Regulations and Guidelines					
7.1 Response to externally-imposed regulations					
7.2 Response to internally-developed regulations					
8. Professional Skills as a Means for Standardization of the Work Process					
9. Hierarchical Supervision					
10. Schoolwide Communication Structures					
10.1 Number of different structures					
10.2 Nature of decision-making					
10.3 Main communication group					
11. Culture: Shared Norms, Views, and Values					
III GOVERNING BODY AND MANAGEMENT					
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ABOUT THE AUTHORS

Mart Petri is an organizational psychologist working in the field of education. He has been working as a senior staff member of the General Pedagogic Centre in Amsterdam for many years in educational innovation and restructuring of schools. He is the author of several articles and books on these topics and has conducted workshops in Belgium, Great Britain, and the United States.

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High schools today are more concerned than ever that they are doing their best to prepare their students for a rapidly changing world. One way for them to do this is to take a close look at their organizational and educational structures and how each supports or impedes the school goals. ***CaMaPe: An Organizational and Educational Systems Approach to Secondary School Development*** presents a series of organizational and educational models, discusses the research that supports them, and provides examples of how these models work to help create environments in which schools can develop and improve. It provides a framework for secondary schools to use to assess what type of organizational and educational structures currently exist, to plan strategies for improvement, and to map out a developmental continuum that focuses on teachers and learners.

This book has been adapted for use in the United States by Mart Petri and Gina Burkhardt from ***School Development: Models and Change*** (1988) by Leon de Caluwé, Ernst C. H. Marx, and Mart Petri. It was a collaborative effort by the staffs of The Regional Laboratory for Educational Improvement of the Northeast and Islands, Algemeen Pedagogisch Studiecentrum (APS), a national center for school improvement in the Netherlands, and The NETWORK, Inc., an organization closely associated with The Laboratory. The book is an excellent resource for policymakers, school administrators, internal and external change agents, trainers, researchers, and all others concerned with the improvement and development of secondary schools.

One of ten regional educational laboratories in the United States, The Regional Laboratory for Educational Improvement of the Northeast and Islands serves New England, New York, Puerto Rico, and the Virgin Islands and is sponsored primarily by the United States Education Department's Office of Educational Research and Improvement. The Laboratory has been serving the educators and policymakers of the Northeast and Islands since 1985. For information about the Laboratory call or write:

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